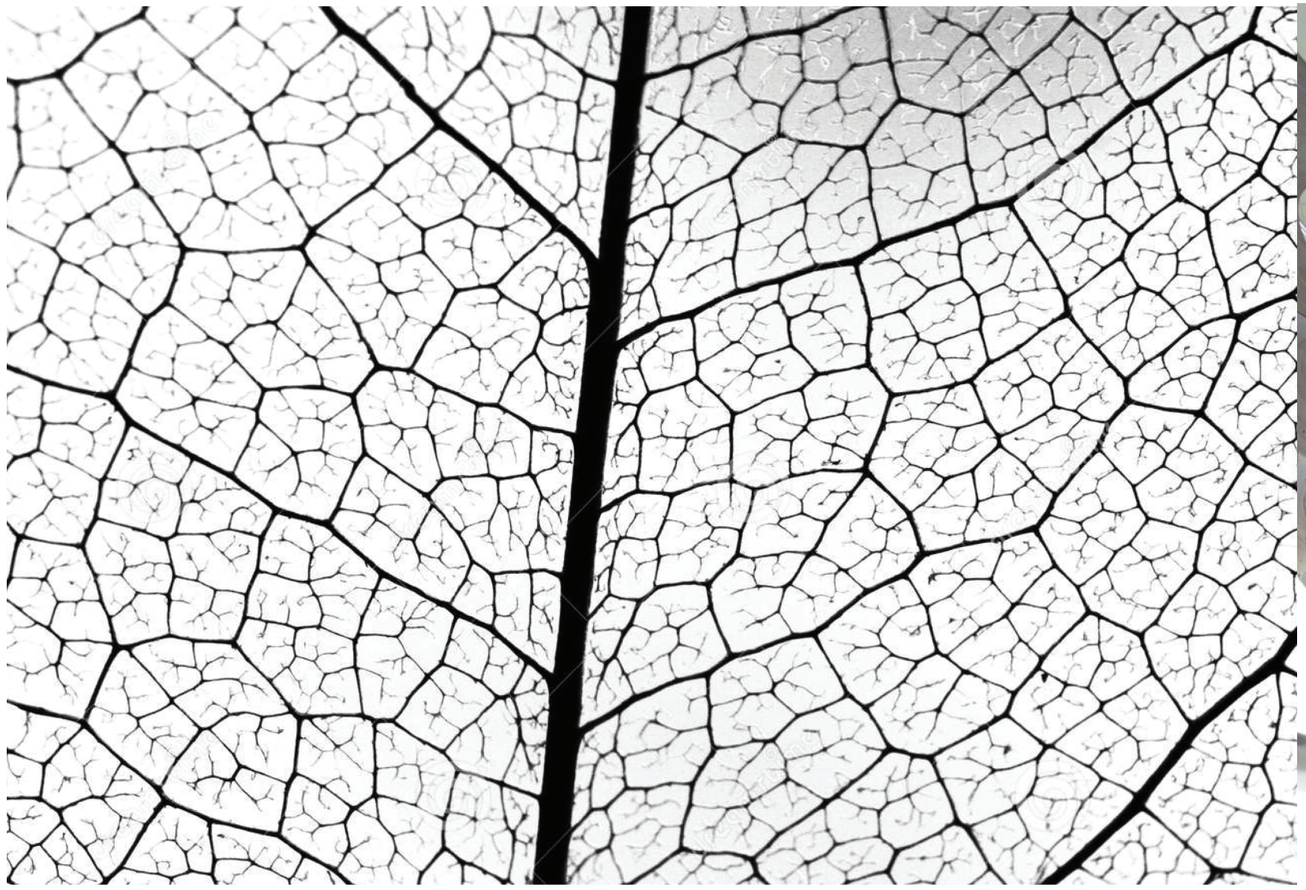
APERTURE STRATA

PRIVACY SCREEN

PAM CHAIYACHANORN | NINA DJURKOVIC | ANA VASQUEZ

DESIGN INSPIRATION



"LAVEUTDELEFEVRE"

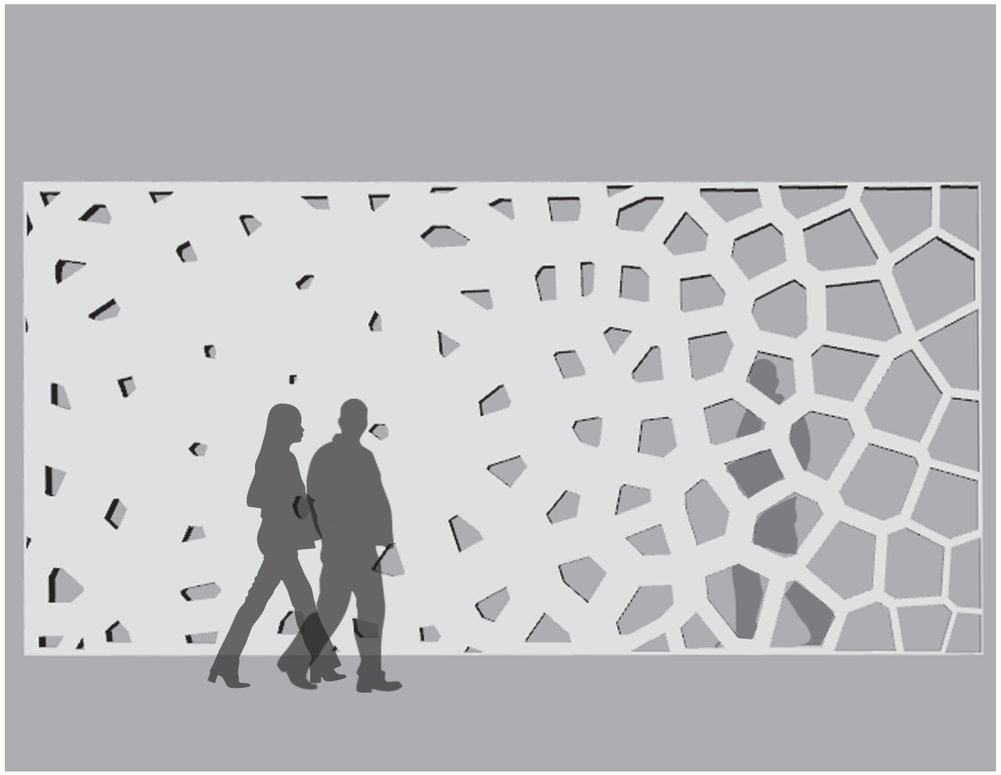
PRINCIPAL:
BRANDON CLIFFORD + WES MCGEE

MATERIAL:
BALTIC BIRCH PLYWOOD

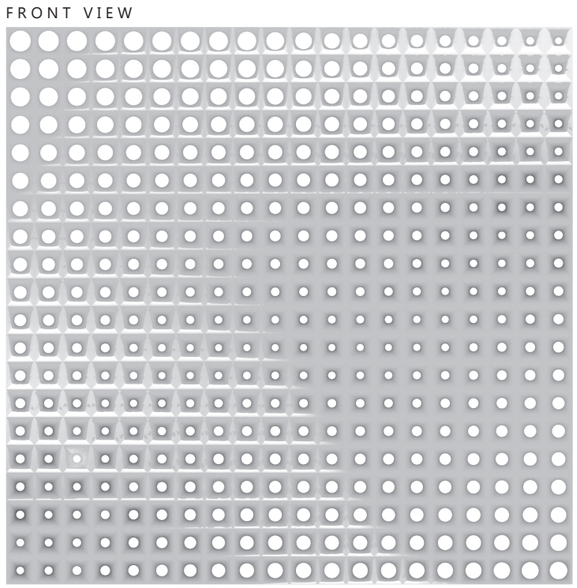
YEAR:
2012

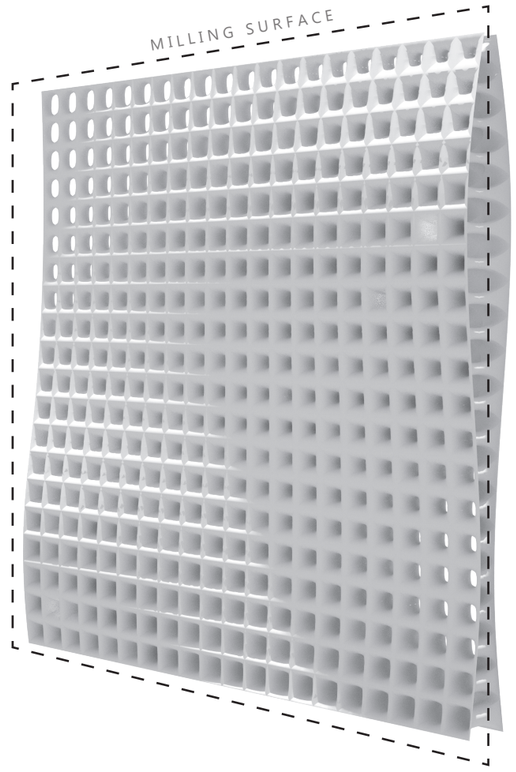
LOCATION:
COLUMBUS OHIO

INITIAL SCREENS



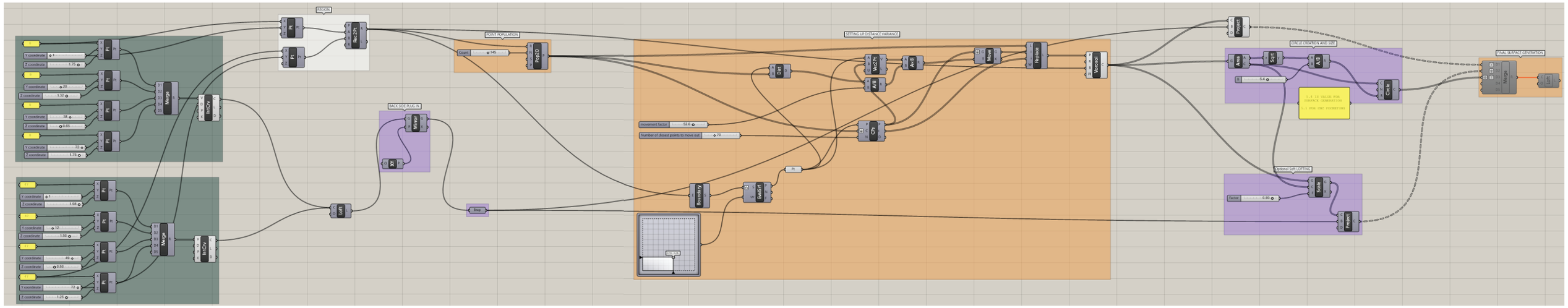
VORONOI DRIVEN DEFINITION



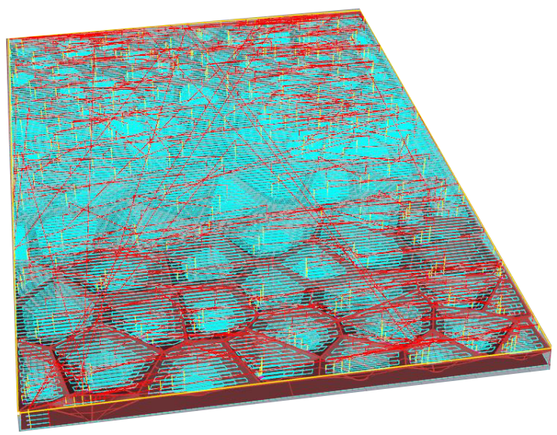


MILLING CIRCULAR APPERTURE VARIATION VIA ATTRACTORS

GRASSHOPPER DEFINITION

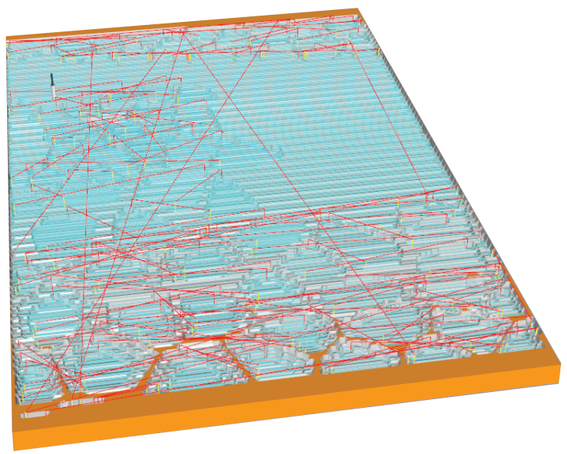


MILLING PREPARTION PROCESSES [RHINOCAM]



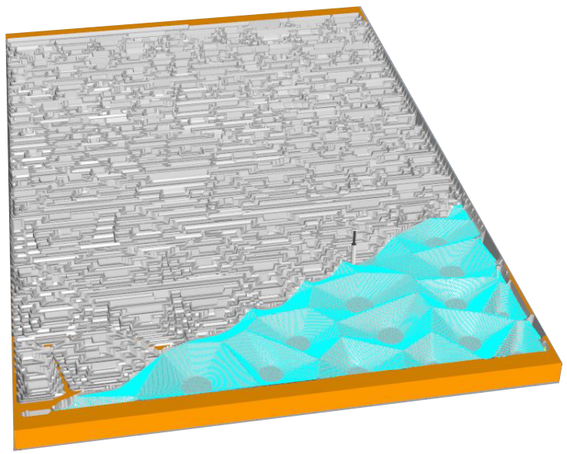
INITIAL CUT

HORIZONTAL ROUGHING
0.5 BALL BIT
2.5HR



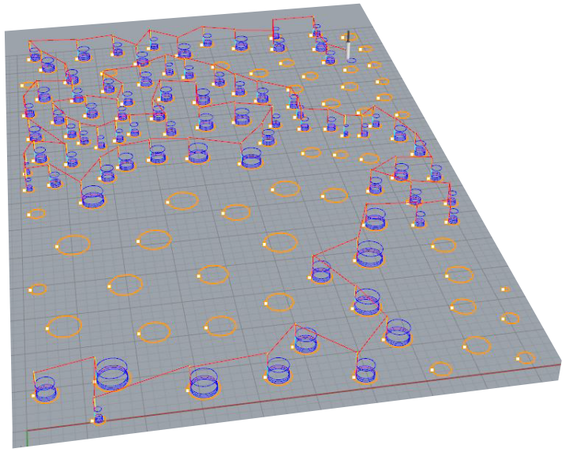
DEFINING VORONOI FORM

PARALLEL FINISHING
0.5 BALL BIT
2.5HR



APERTURE CUTS

AXIS PROFILING
0.5 FLAT BIT
1 HR

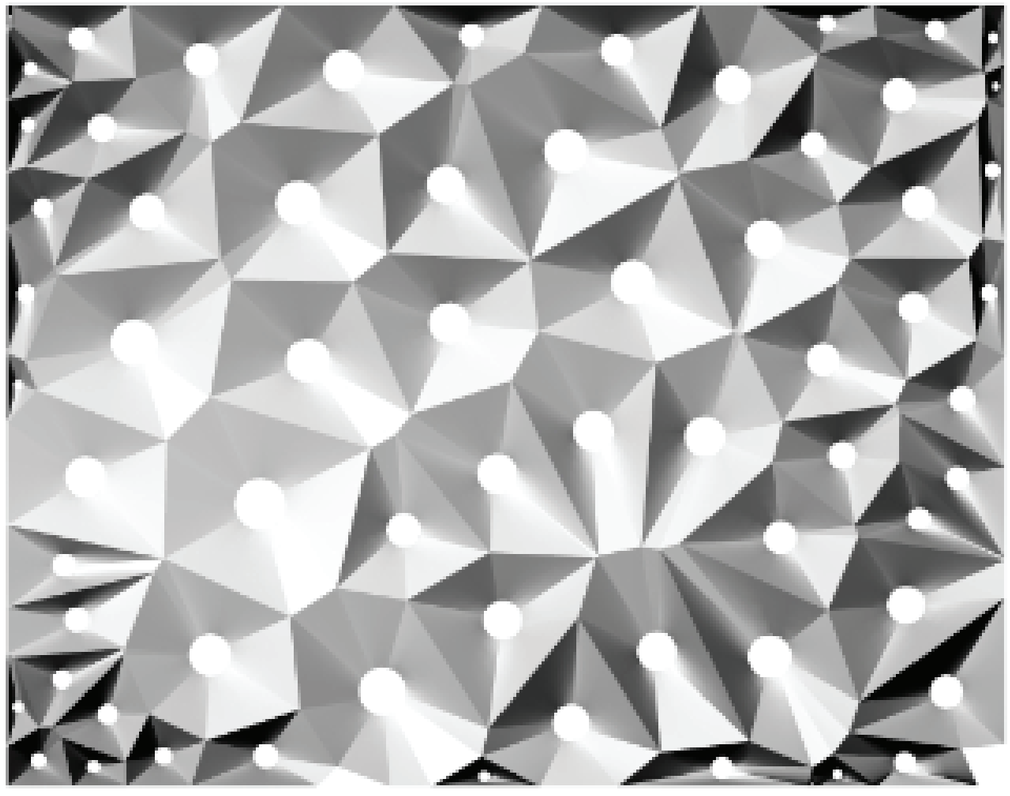


VERSION 1

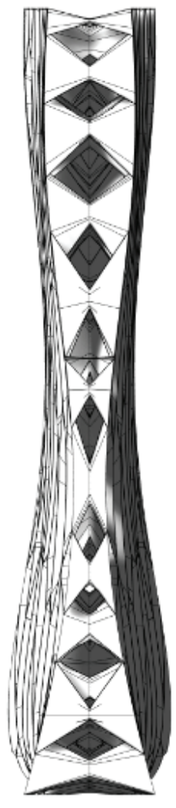
BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4

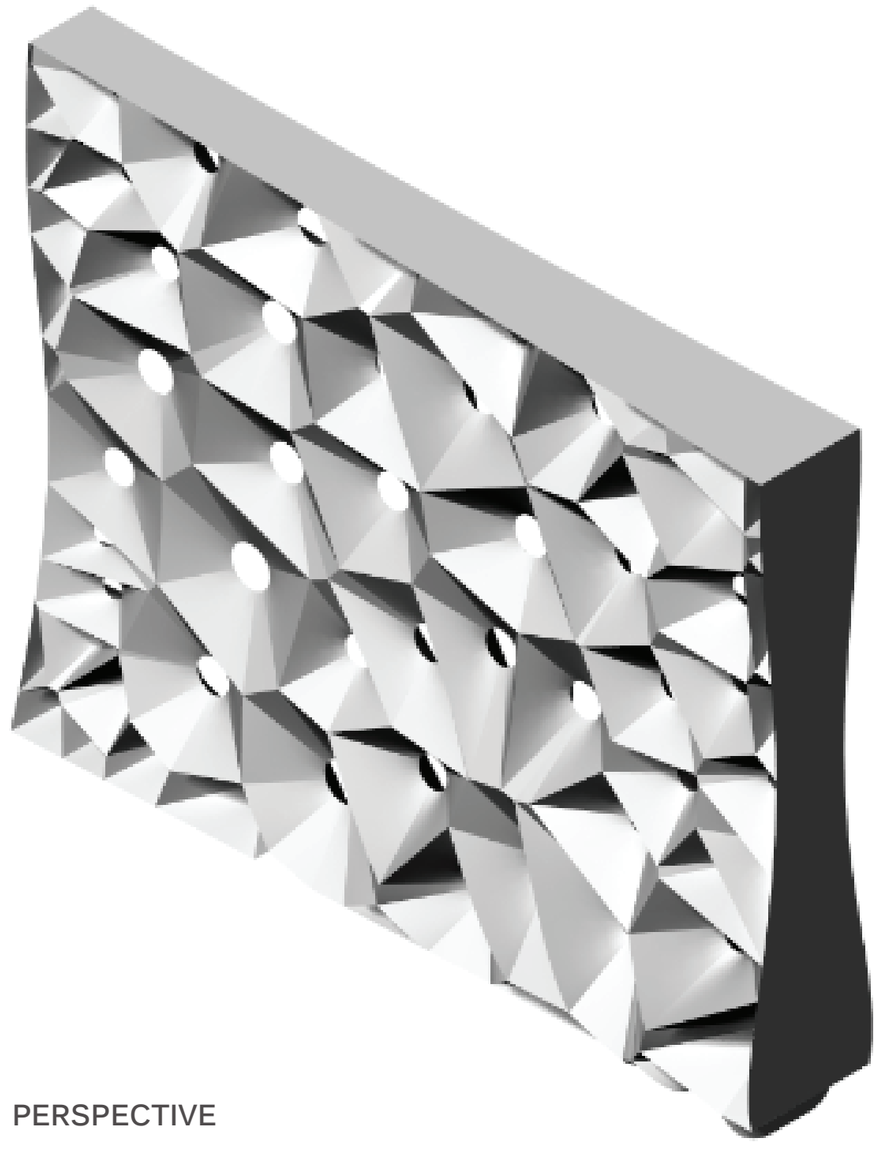
PLAN VIEW



FRONT VIEW



SECTION

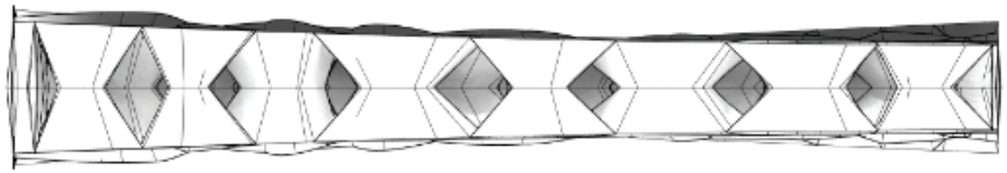


PERSPECTIVE

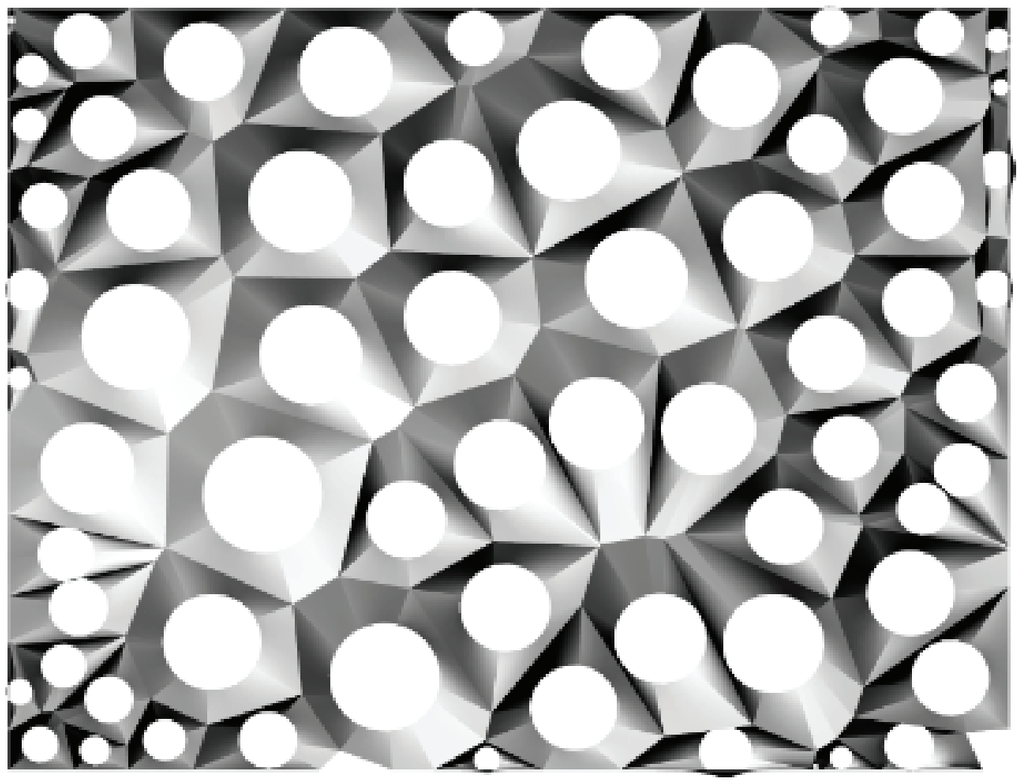
VERSION 2

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 3 (MIN)
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

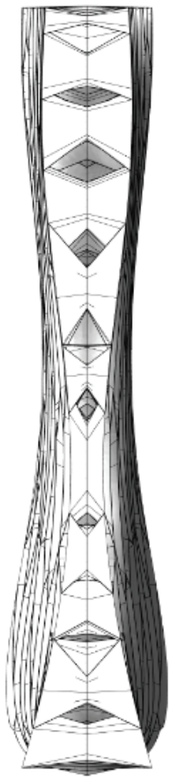
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



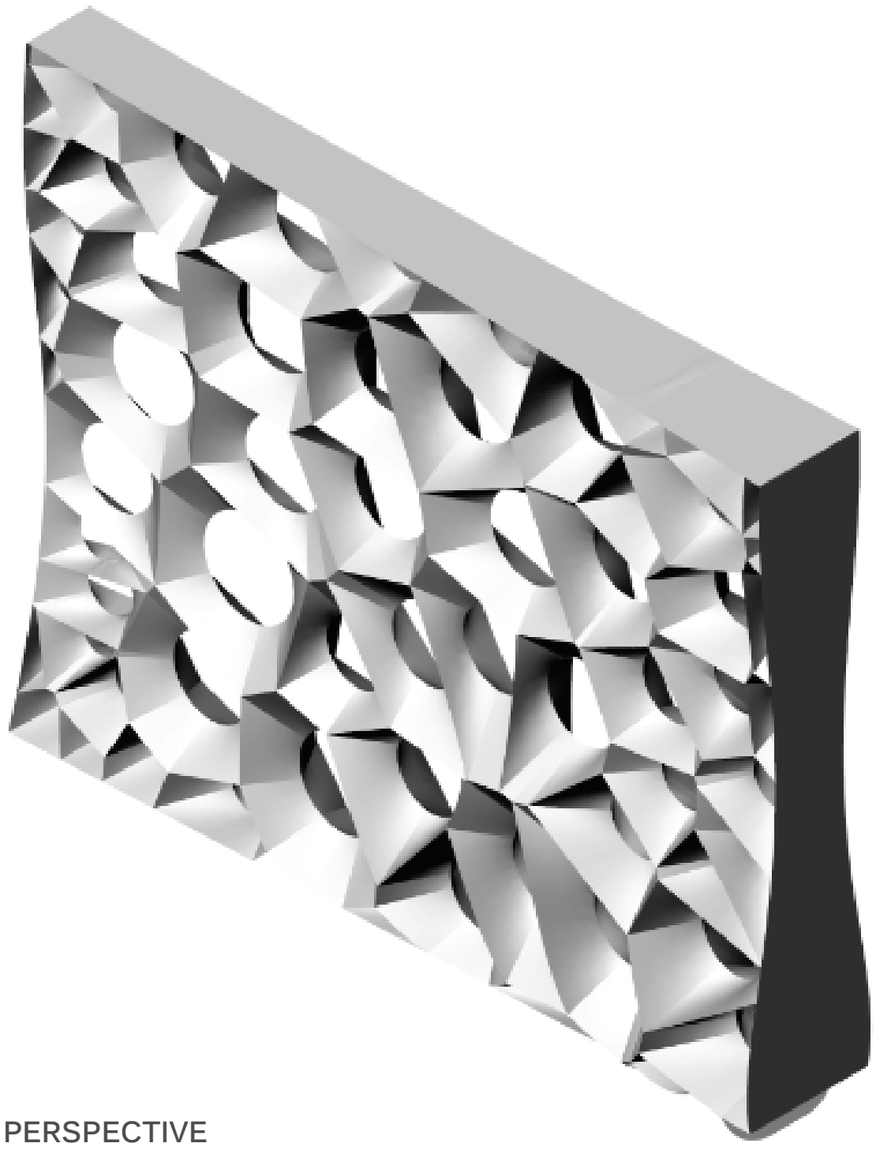
PLAN VIEW



FRONT VIEW



SECTION

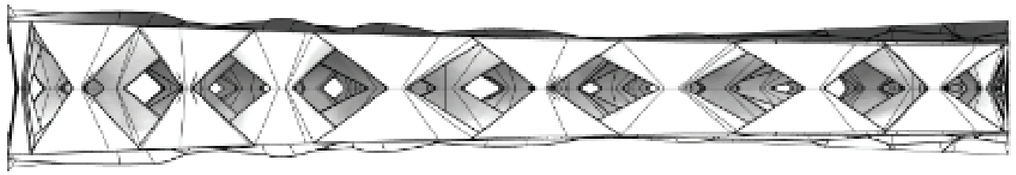


PERSPECTIVE

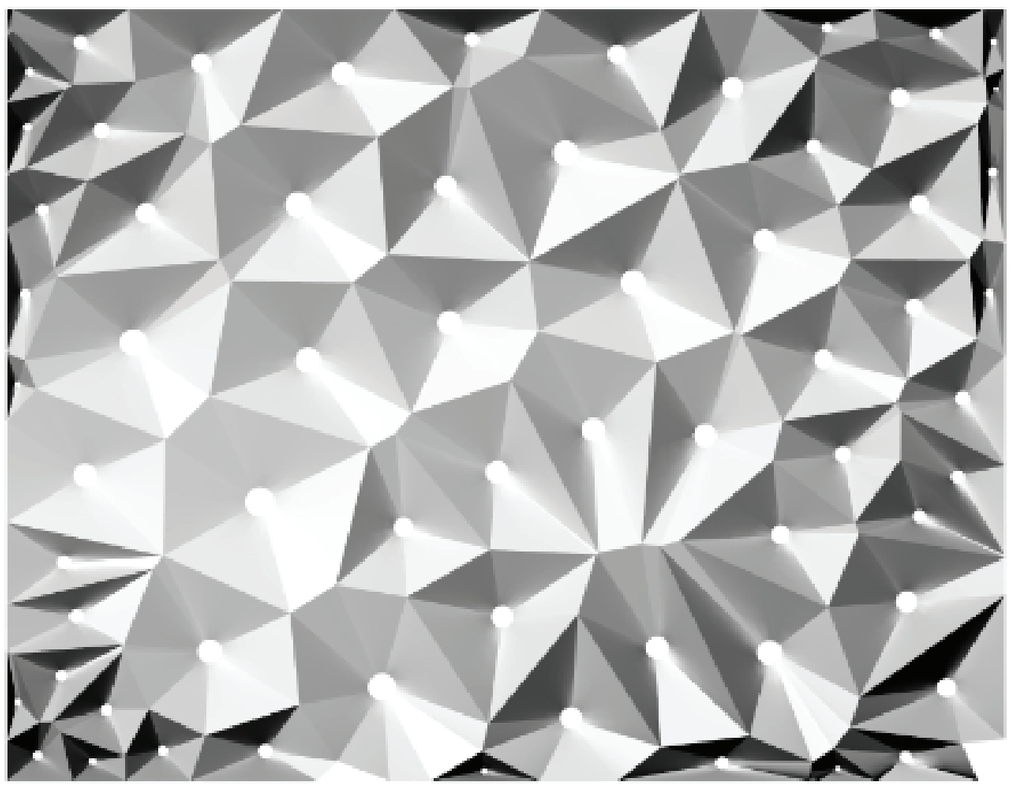
VERSION 3

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 12(MAX)
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

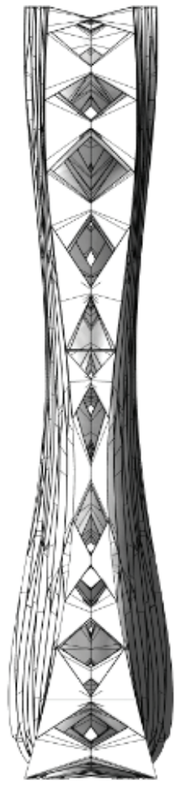
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



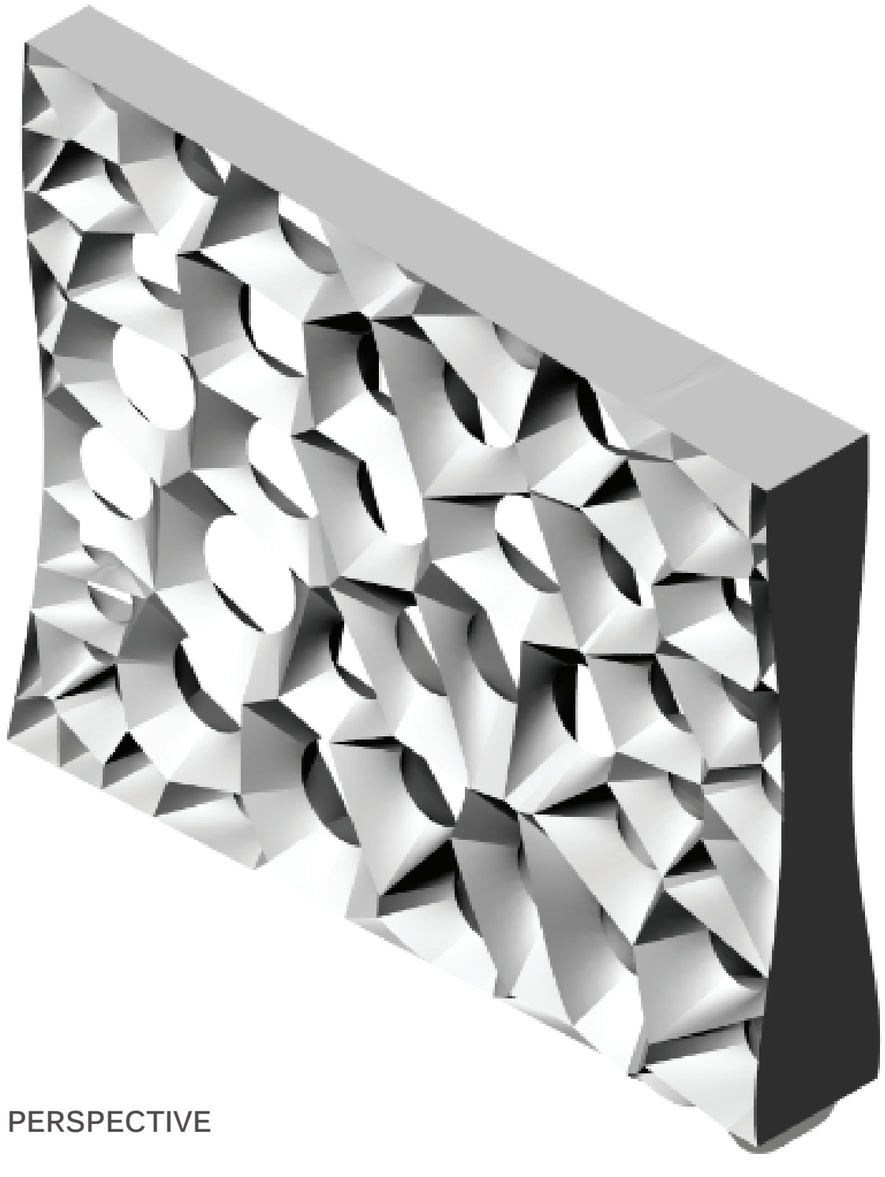
PLAN VIEW



FRONT VIEW



SECTION

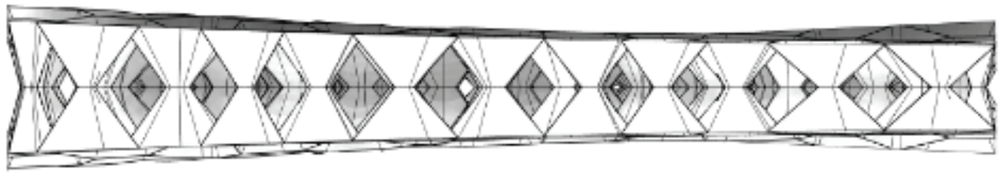


PERSPECTIVE

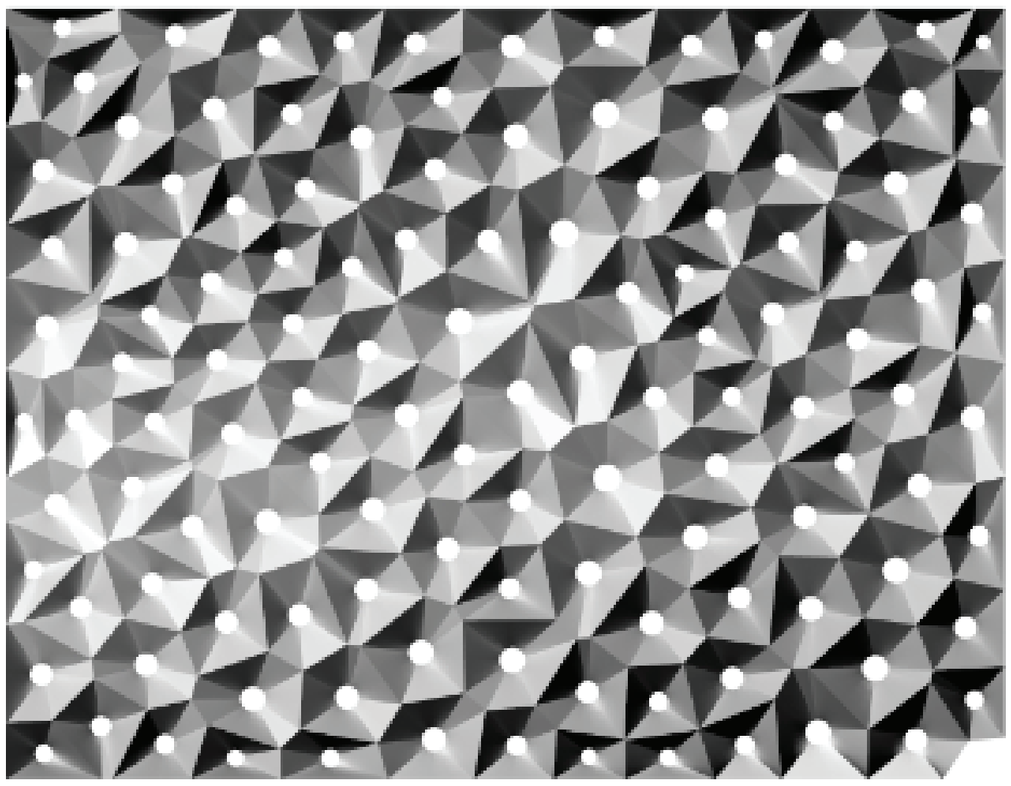
VERSION 4

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 1(MIN)

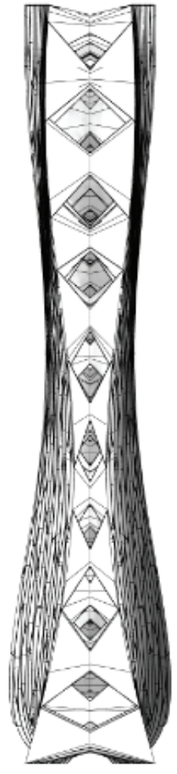
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



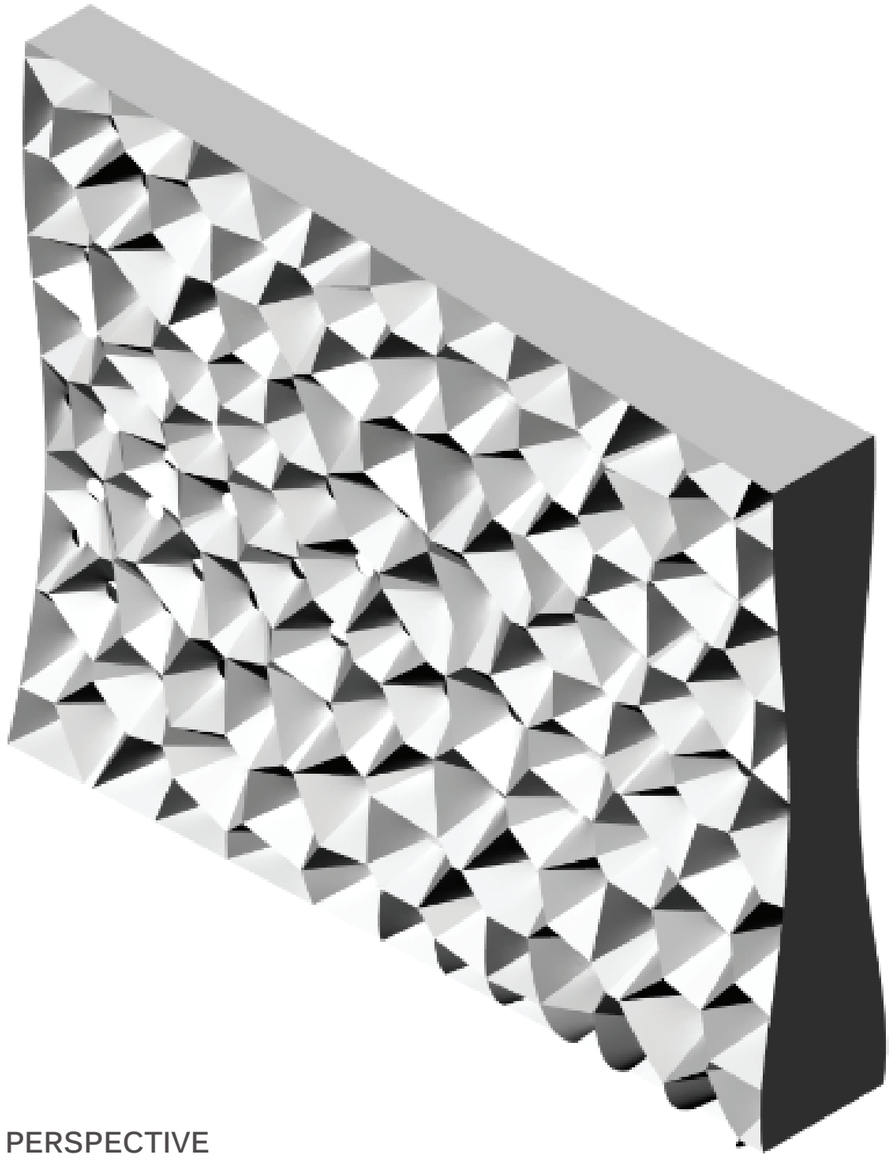
PLAN VIEW



FRONT VIEW



SECTION

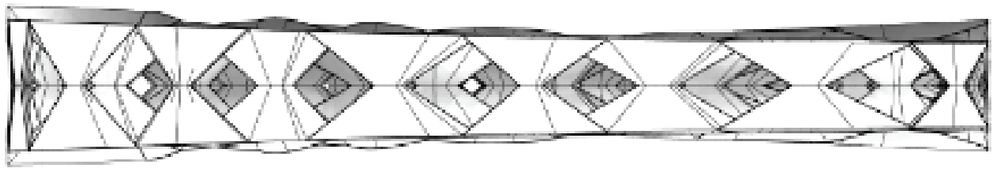


PERSPECTIVE

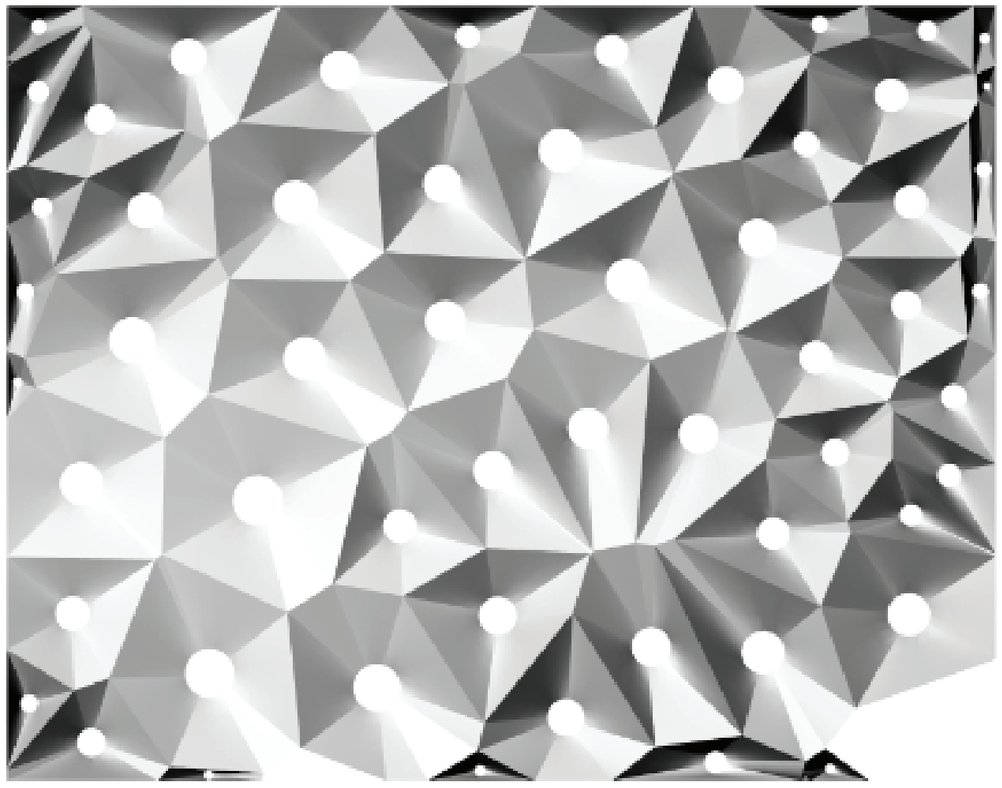
VERSION 5

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 230(MAX)

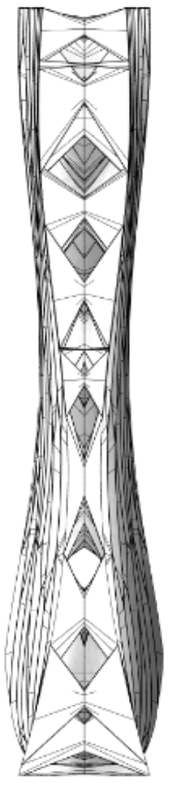
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



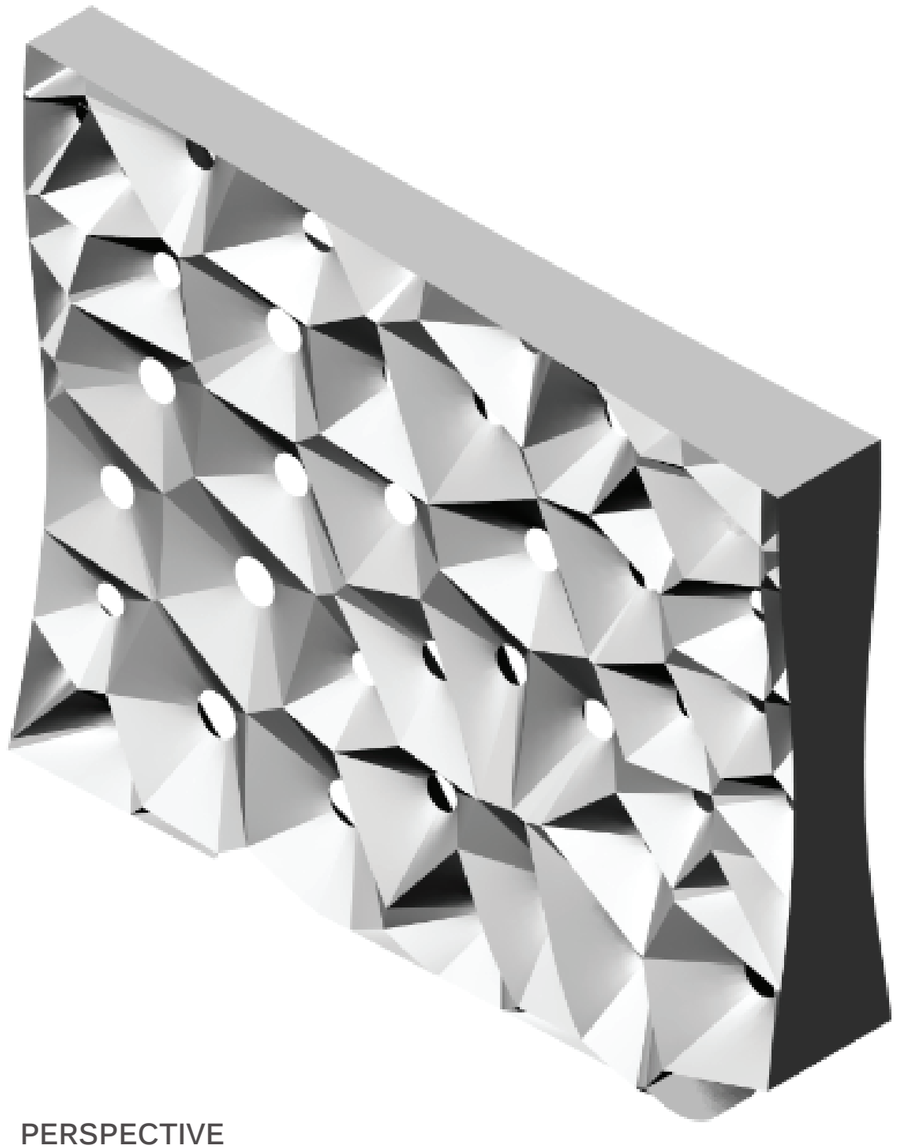
PLAN VIEW



FRONT VIEW



SECTION

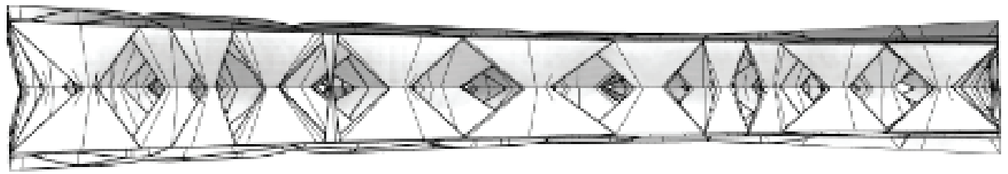


PERSPECTIVE

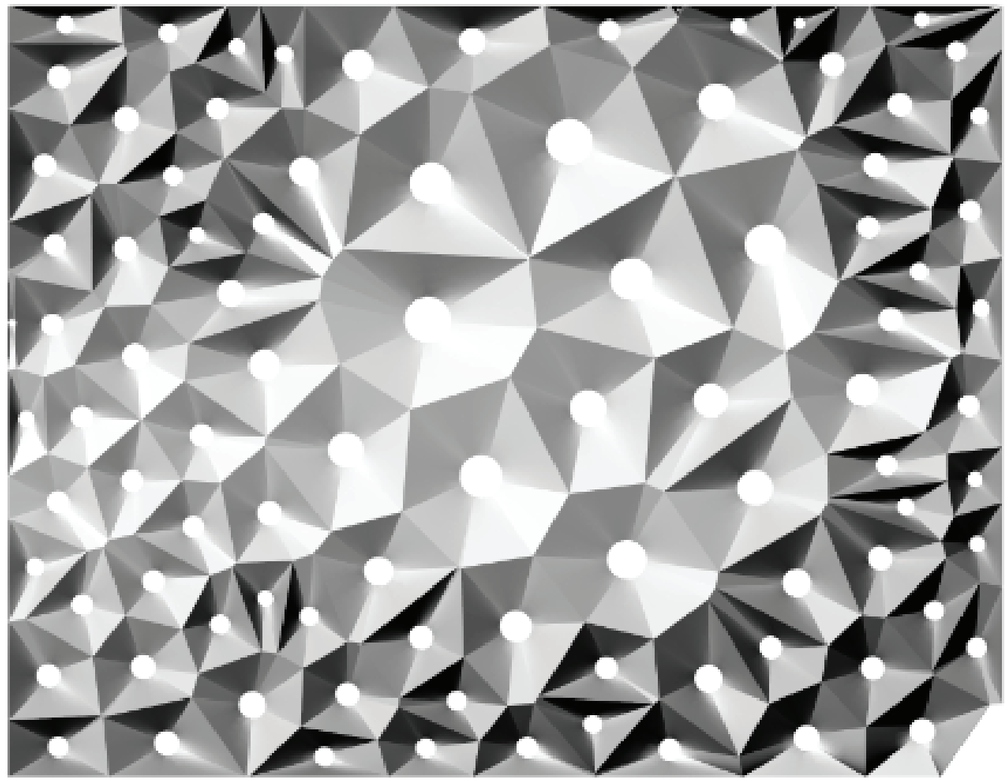
VERSION 6

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 100 (MIN)
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

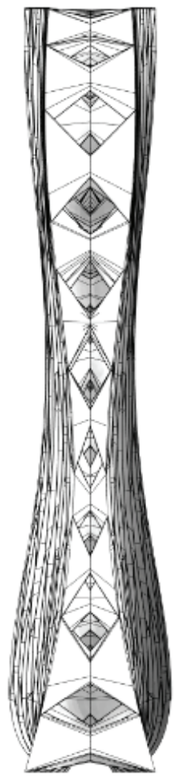
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



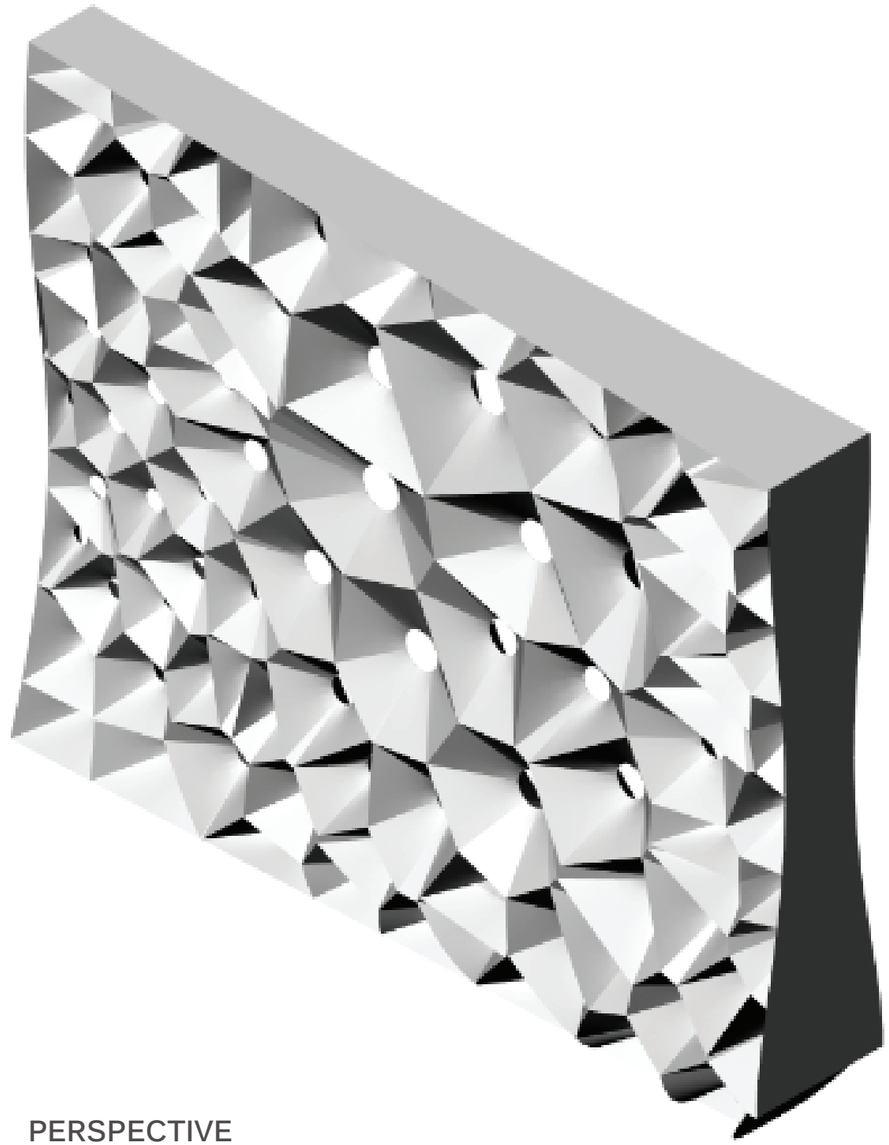
PLAN VIEW



FRONT VIEW



SECTION

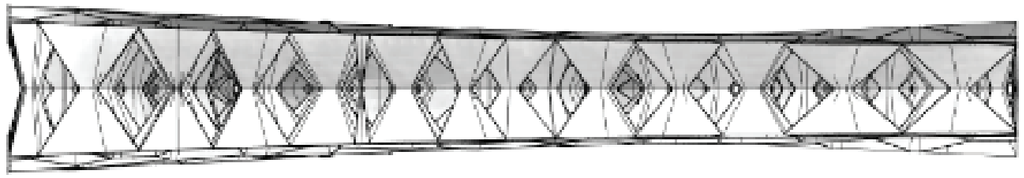


PERSPECTIVE

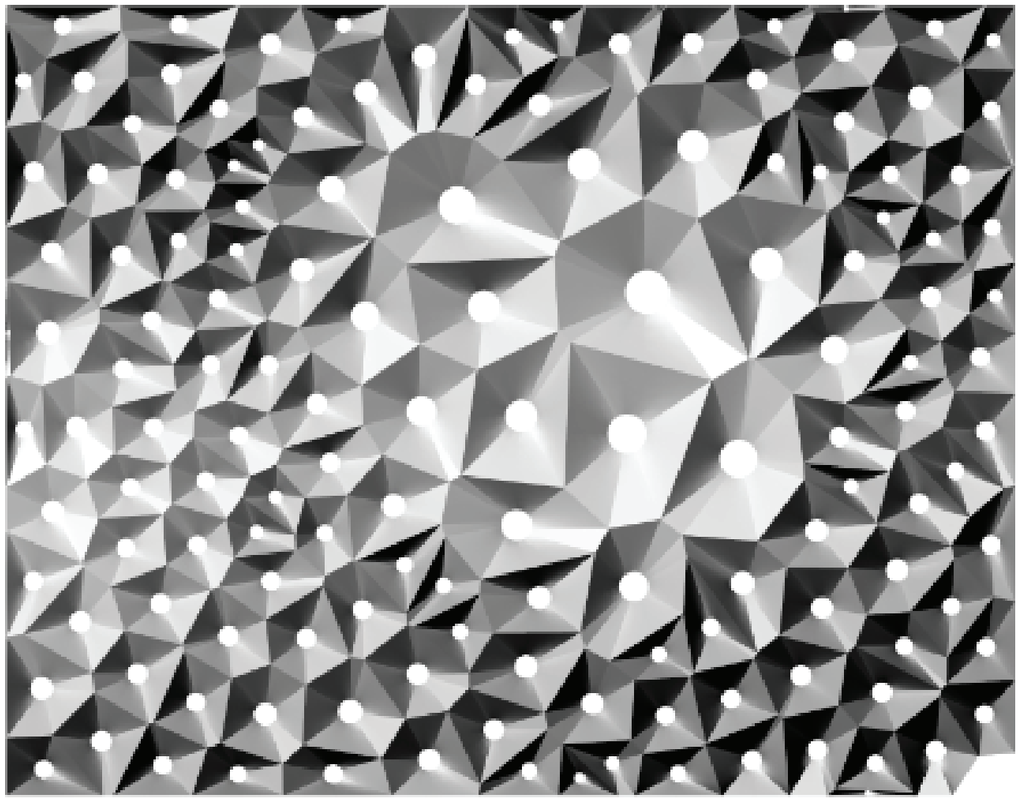
VERSION 7

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 150 (MAX)
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

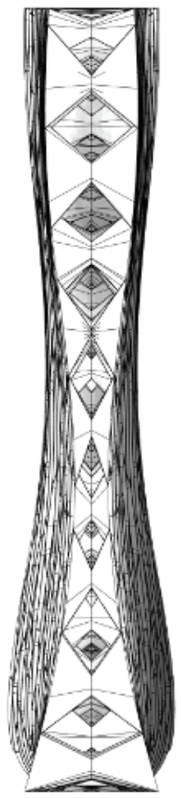
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



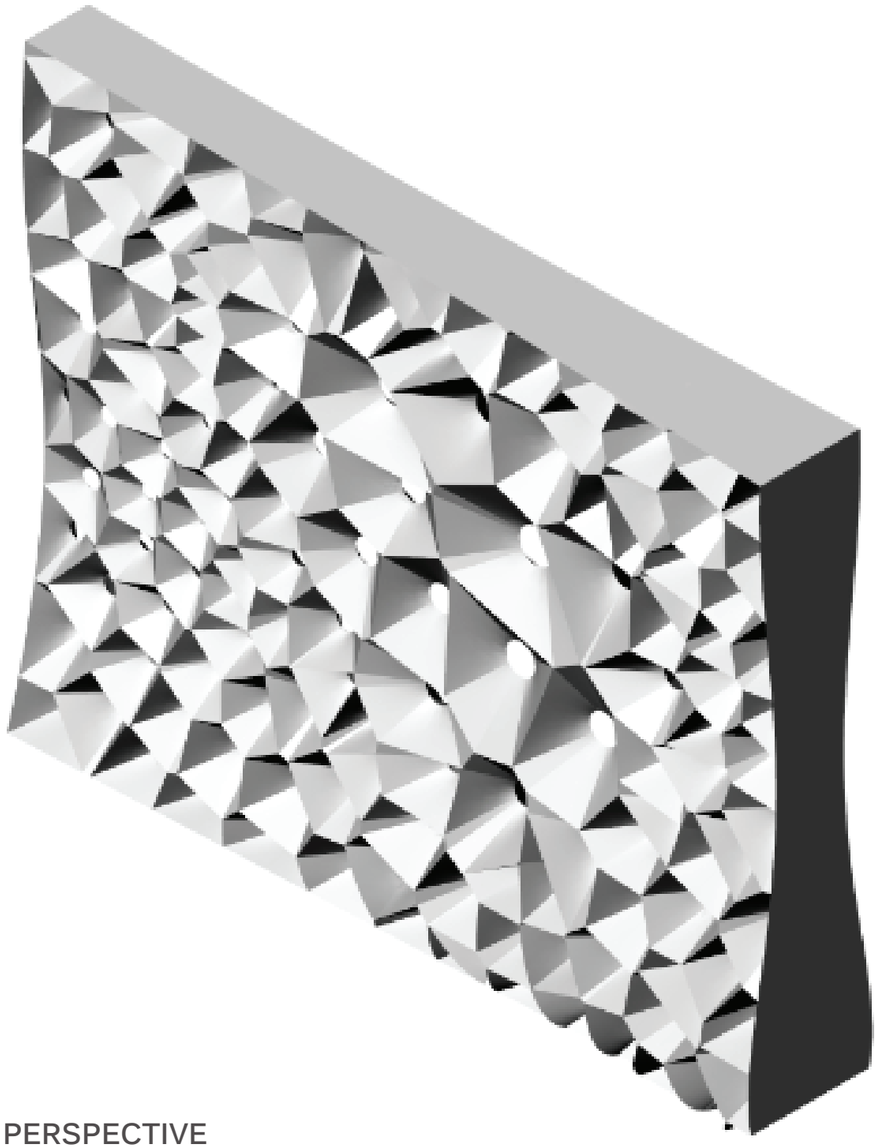
PLAN VIEW



FRONT VIEW



SECTION

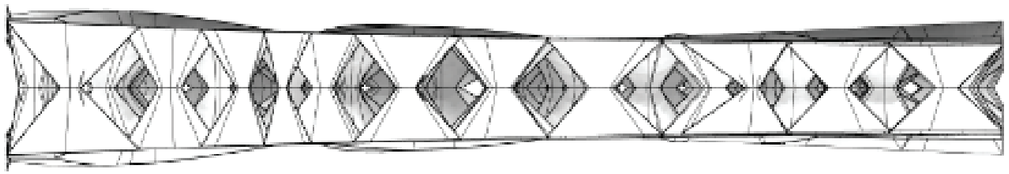


PERSPECTIVE

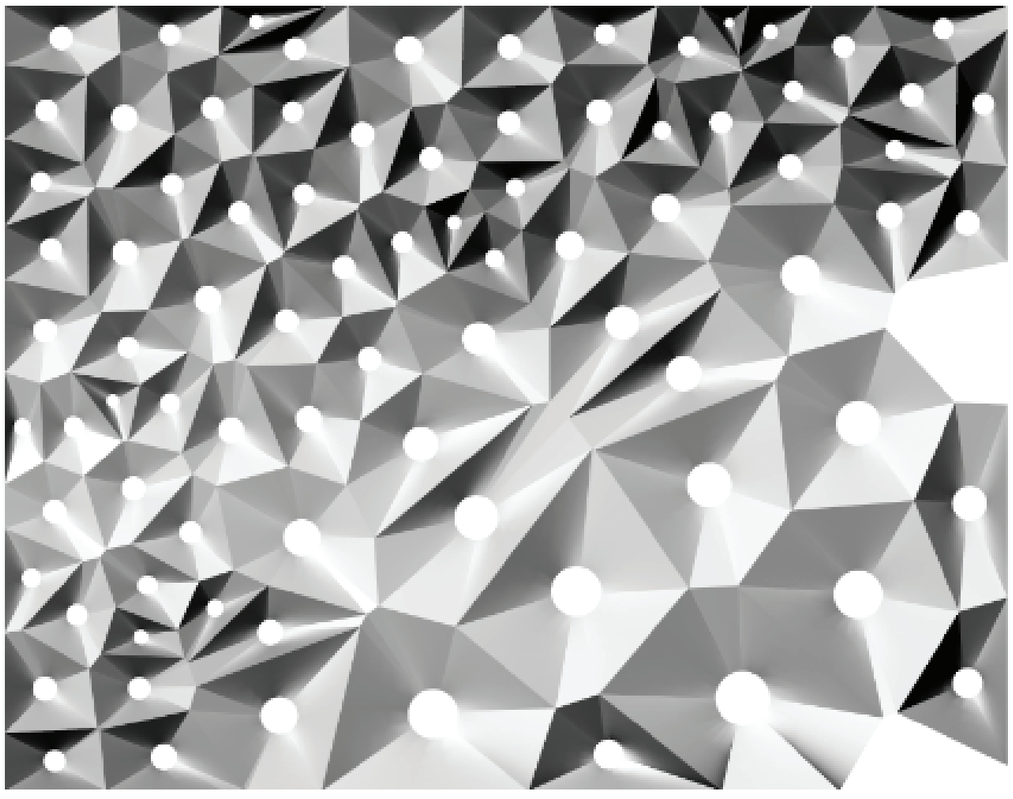
VERSION 8

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.72;0.3
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

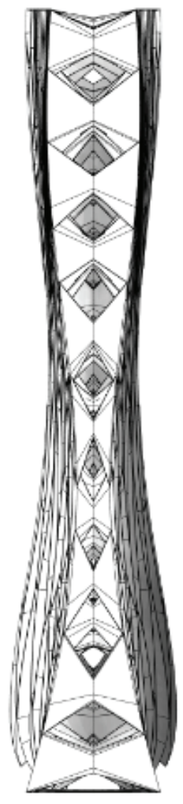
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



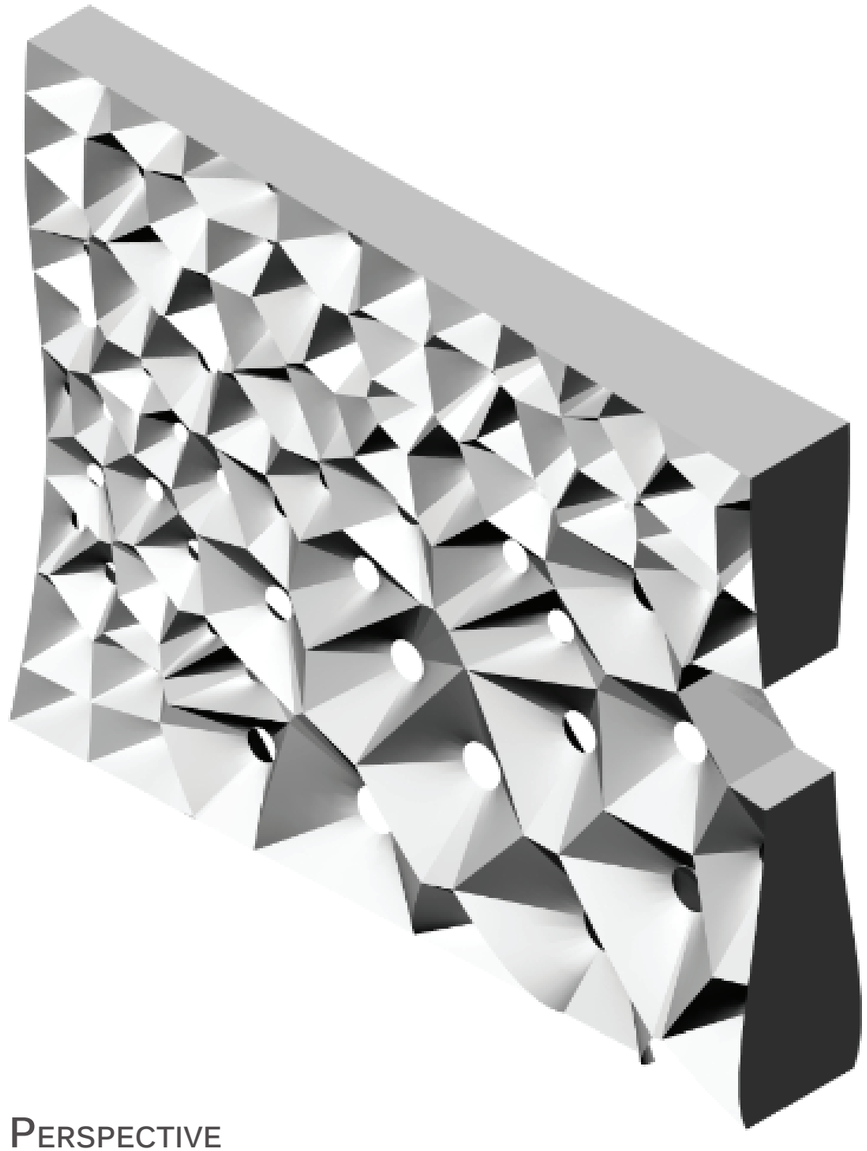
PLAN VIEW



FRONT VIEW



SECTION

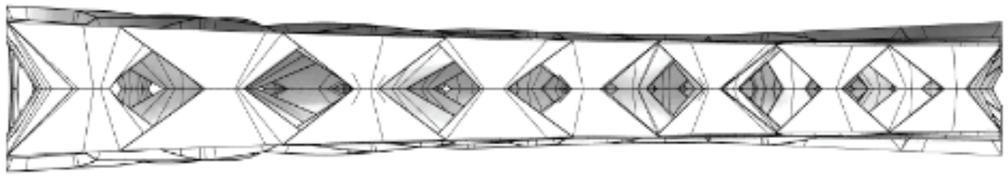


PERSPECTIVE

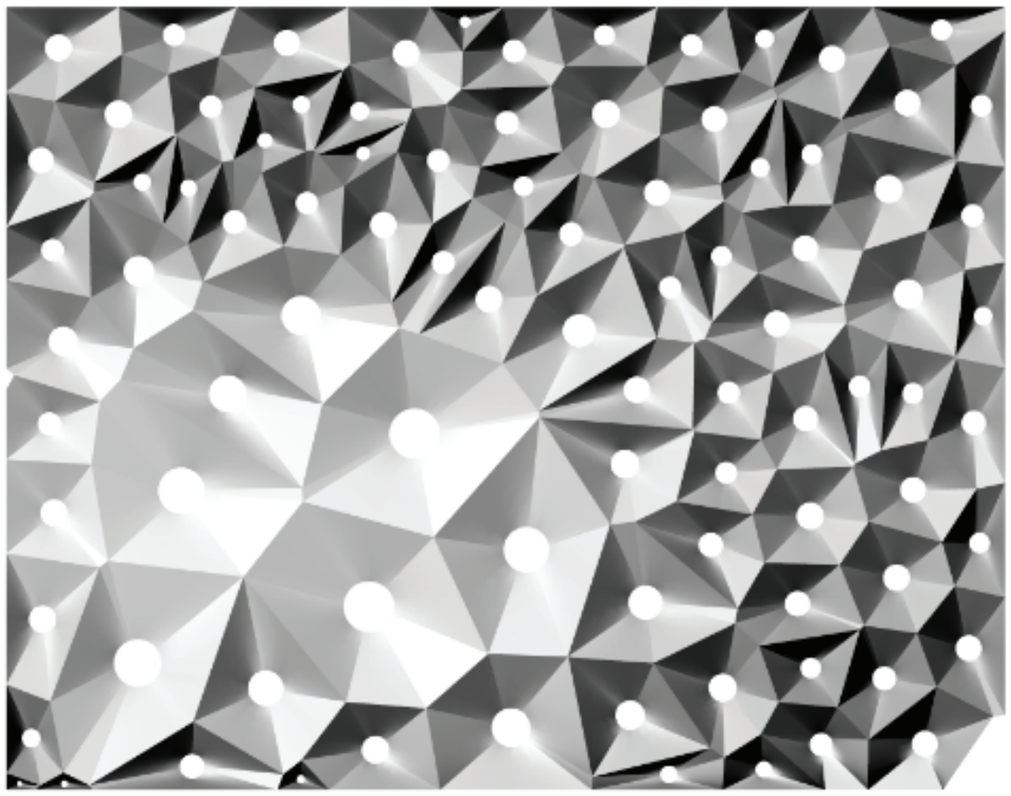
VERSION 9

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.77;0.69
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

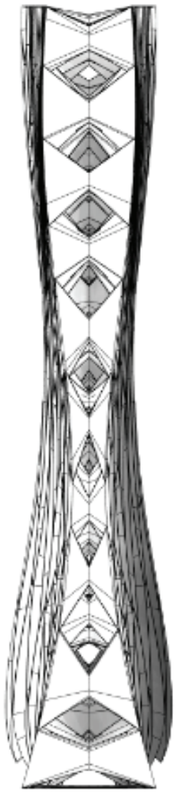
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



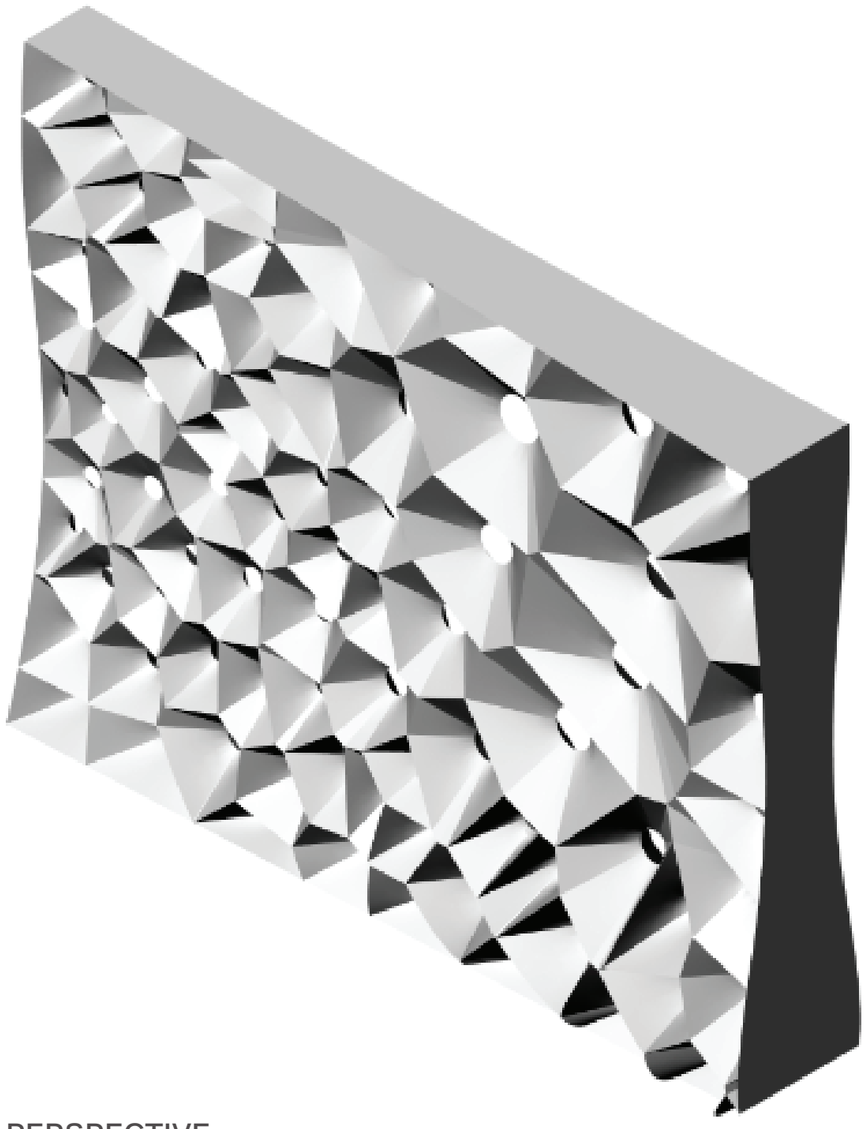
PLAN VIEW



FRONT VIEW



SECTION

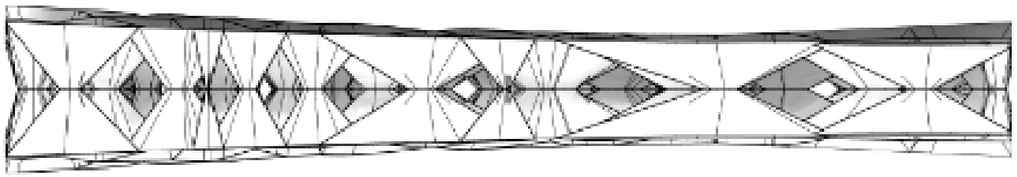


PERSPECTIVE

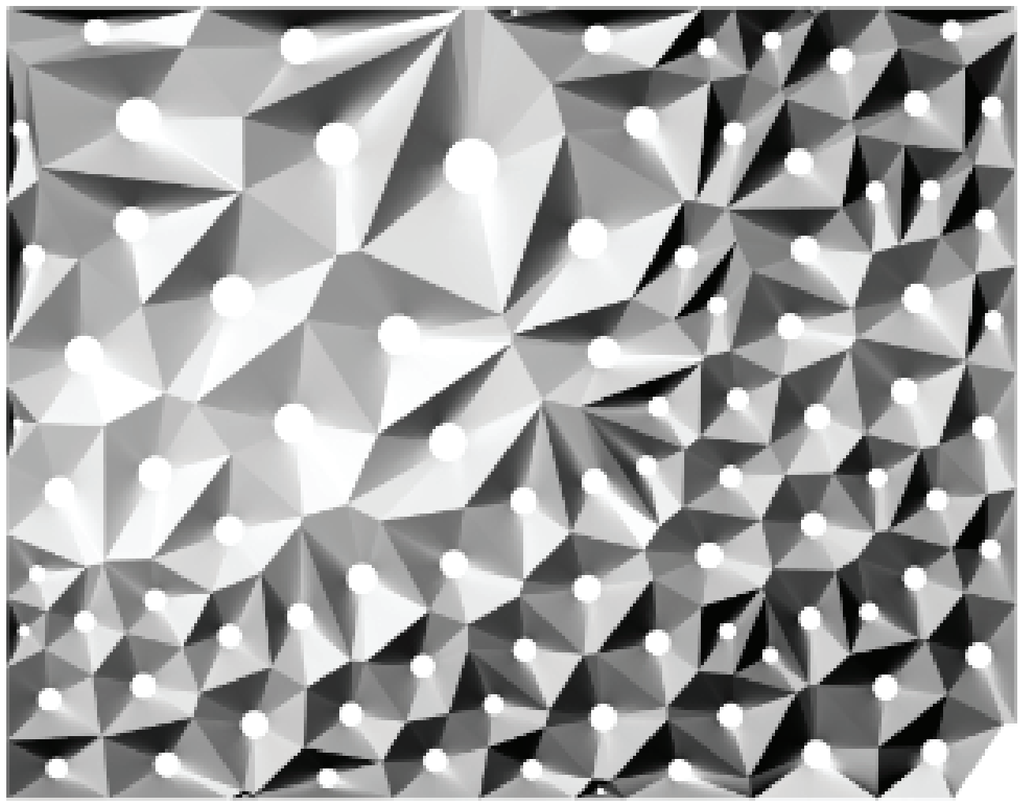
VERSION 10

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.25;0.88
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

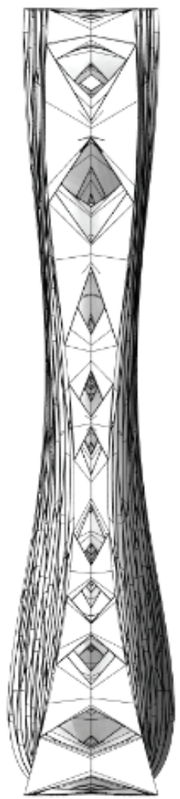
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



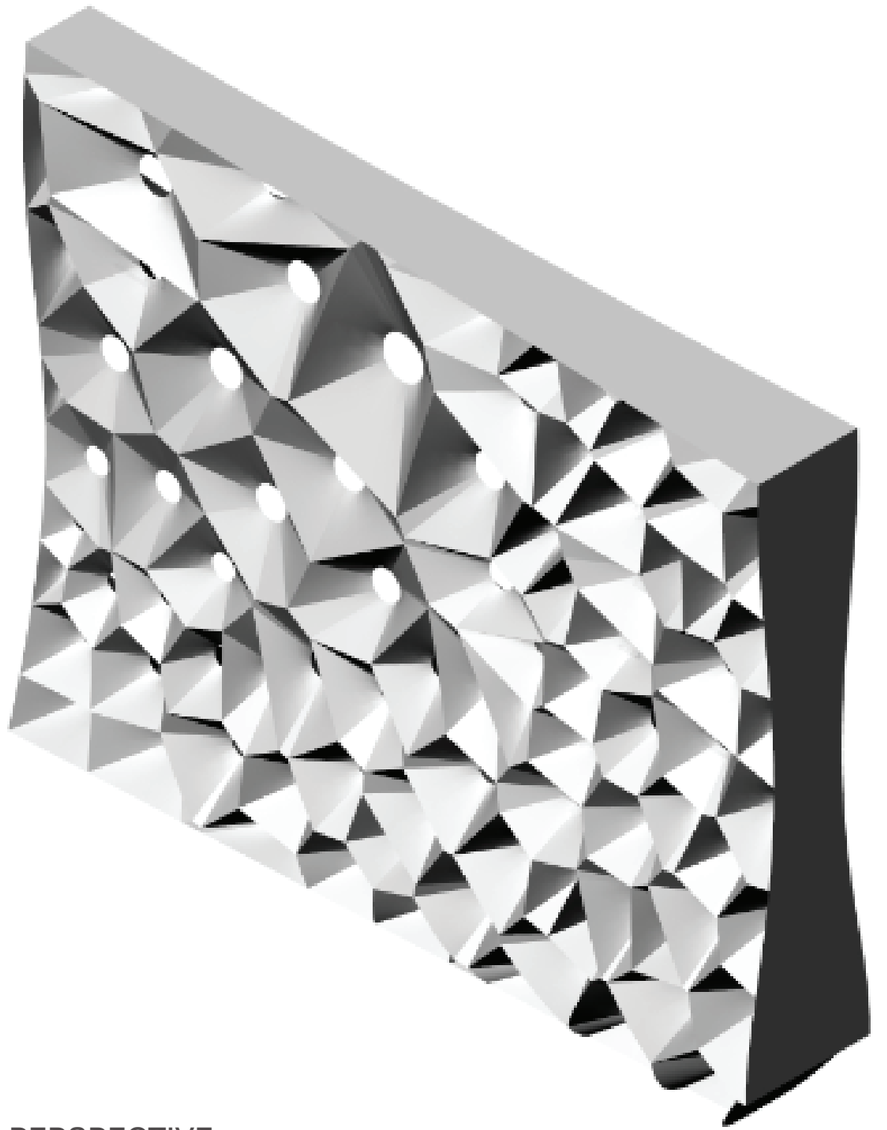
PLAN VIEW



FRONT VIEW



SECTION

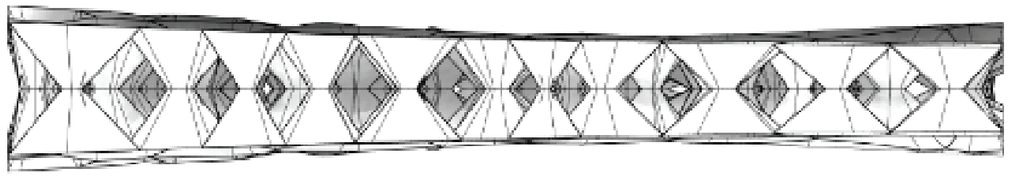


PERSPECTIVE

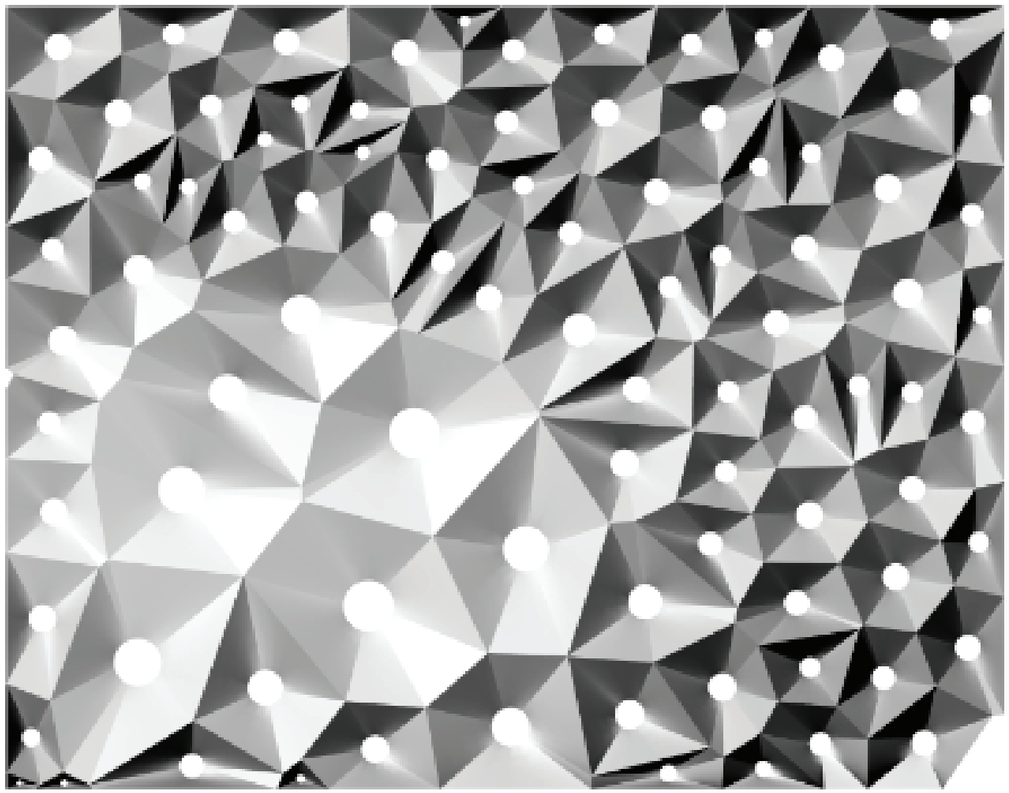
VERSION 11

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.32;0.28
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

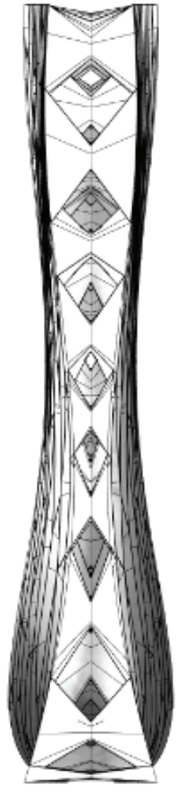
REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 4 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 2.67 PT 4 Y:60, PT 4Z: 4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.25 PT2 Y: 1, PT 2 Z: 1.74
PT 3 Y: 17, PT 3 Z: 3.46 PT 4 Y:48, PT 4Z: 4



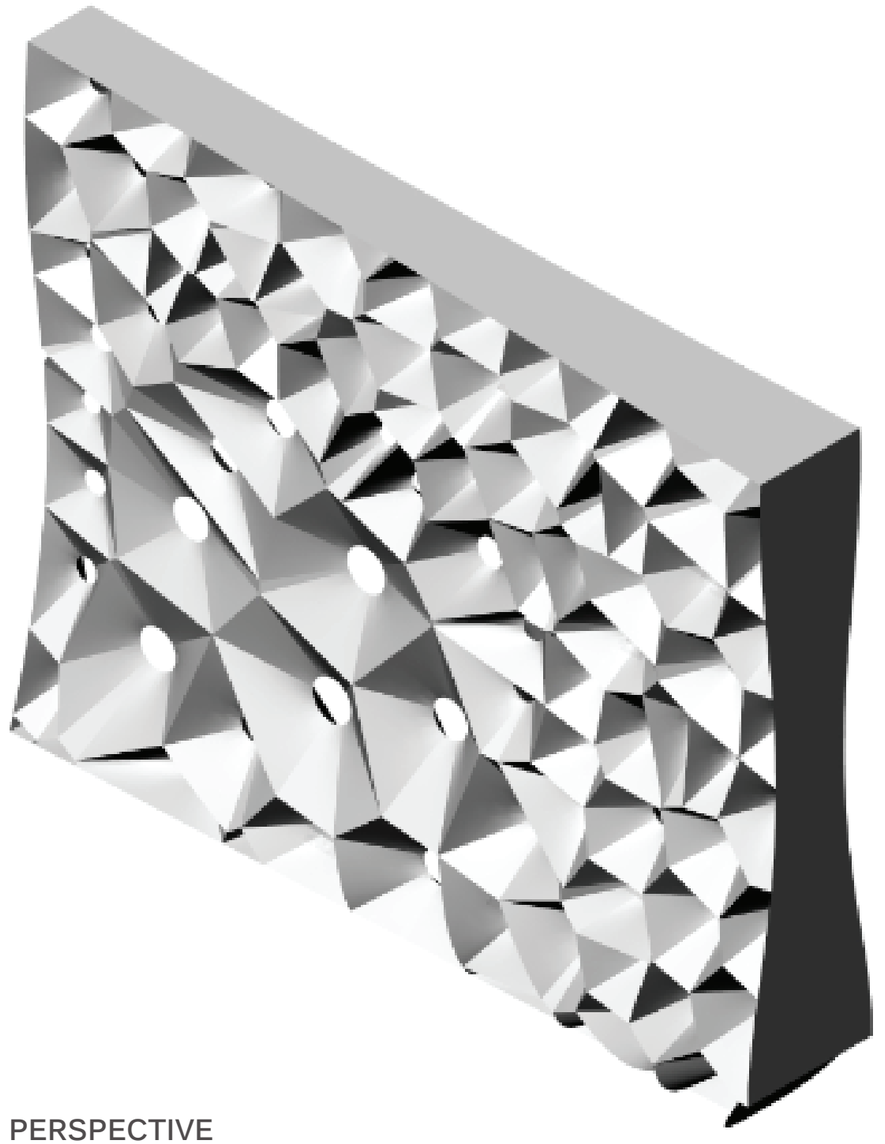
PLAN VIEW



FRONT VIEW



SECTION

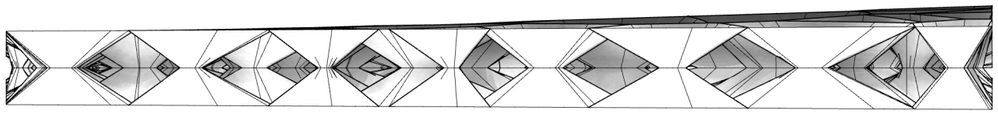


PERSPECTIVE

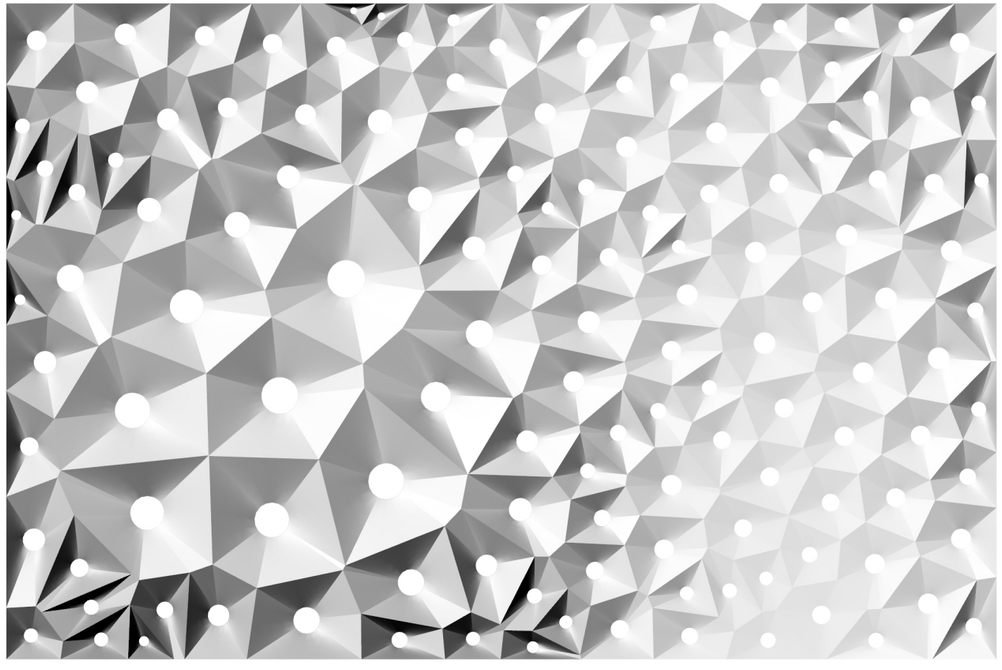
VERSION 12

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

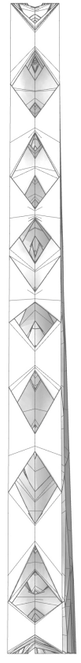
WALL A:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 1.75 PT2 Y: 20, PT 2 Z: 1.32
PT 3 Y: 38, PT 3 Z: 0.65 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y: 42, PT 2 Z: 1.5
PT 3 Y: 49, PT 3 Z: 0.5 PT 4 Y:72, PT 4Z: 12.5
WALL B:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 1.75 PT2 Y: 20, PT 2 Z: 1.32
PT 3 Y: 38, PT 3 Z: 0.65 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y: 56, PT 2 Z: 1.5
PT 3 Y: 42, PT 3 Z: 0.5 PT 4 Y:72, PT 4Z: 12.5



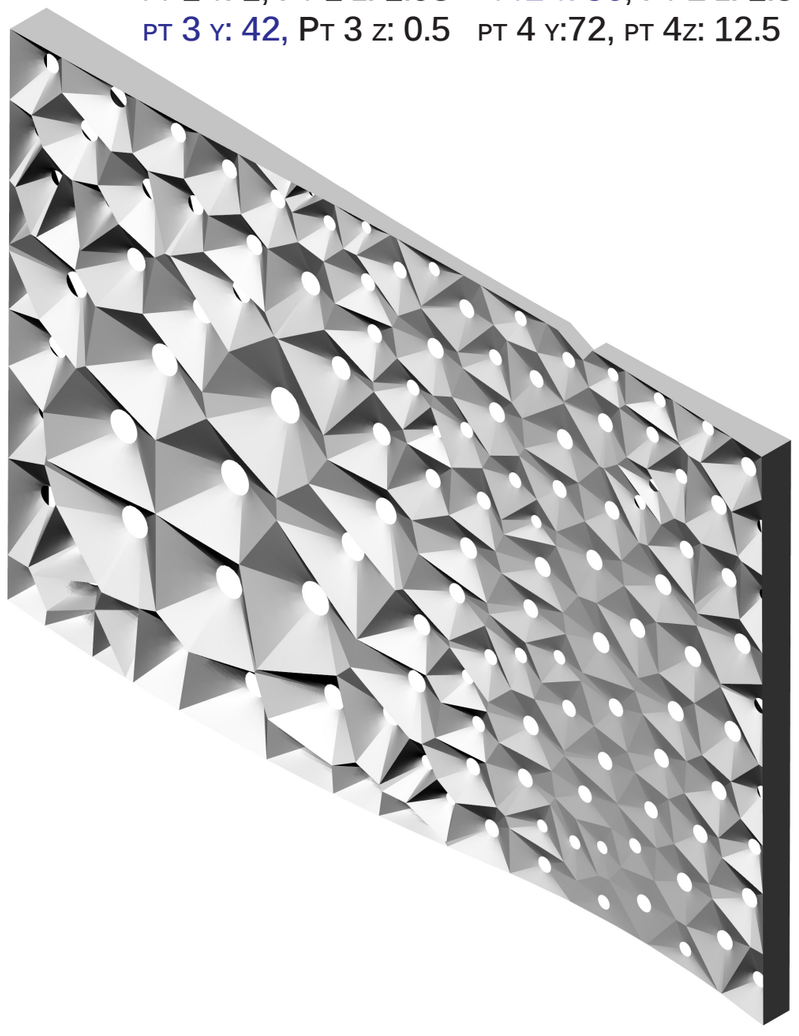
PLAN VIEW



FRONT VIEW



SECTION

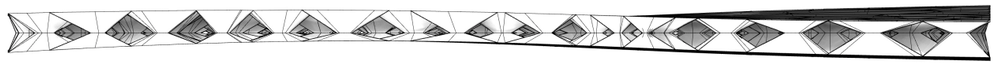


PERSPECTIVE

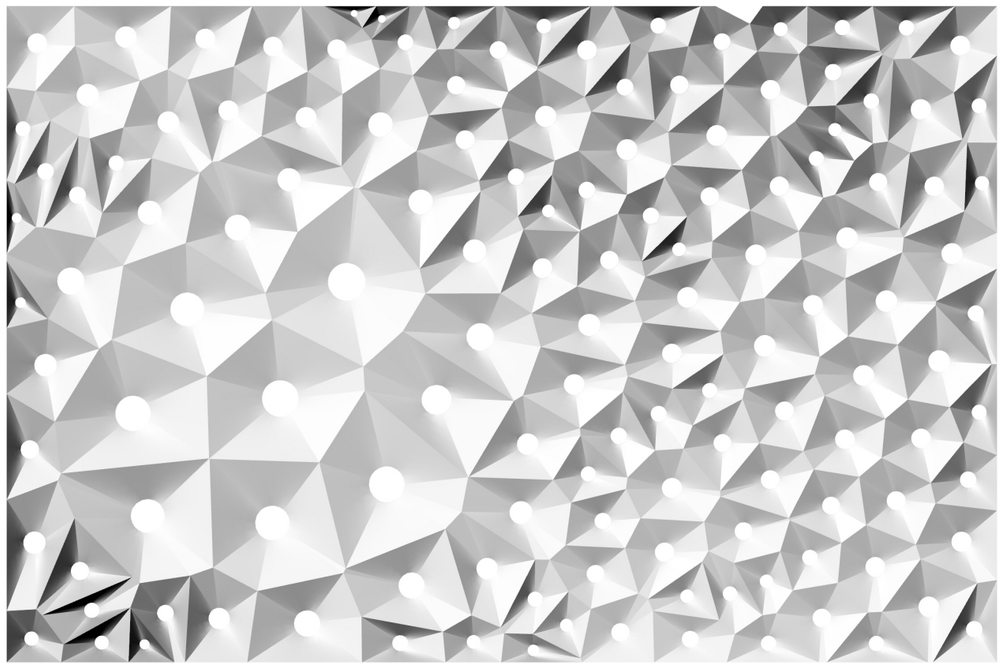
VERSION 13

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

WALL A:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 1.75 PT2 Y: 20, PT 2 Z: 1.32
PT 3 Y: 38, PT 3 Z: 0.65 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y:20, PT 2 Z: 1.5
PT 3 Y: 47, PT 3 Z: 0.5 PT 4 Y:72, PT 4Z: 12.5
WALL B:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 0.8 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 1.5 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y: 56, PT 2 Z: 1.5
PT 3 Y: , PT 3 Z: 0.5 PT 4 Y:72, PT 4Z: 12.5

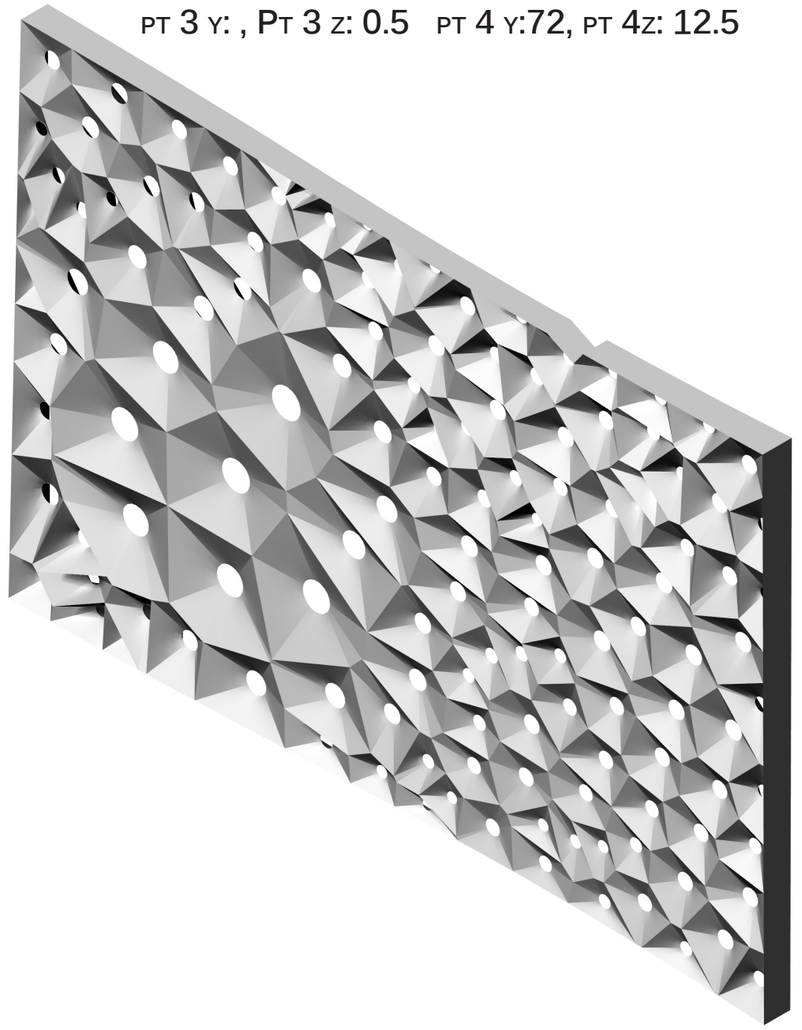


PLAN VIEW



FRONT VIEW

SECTION



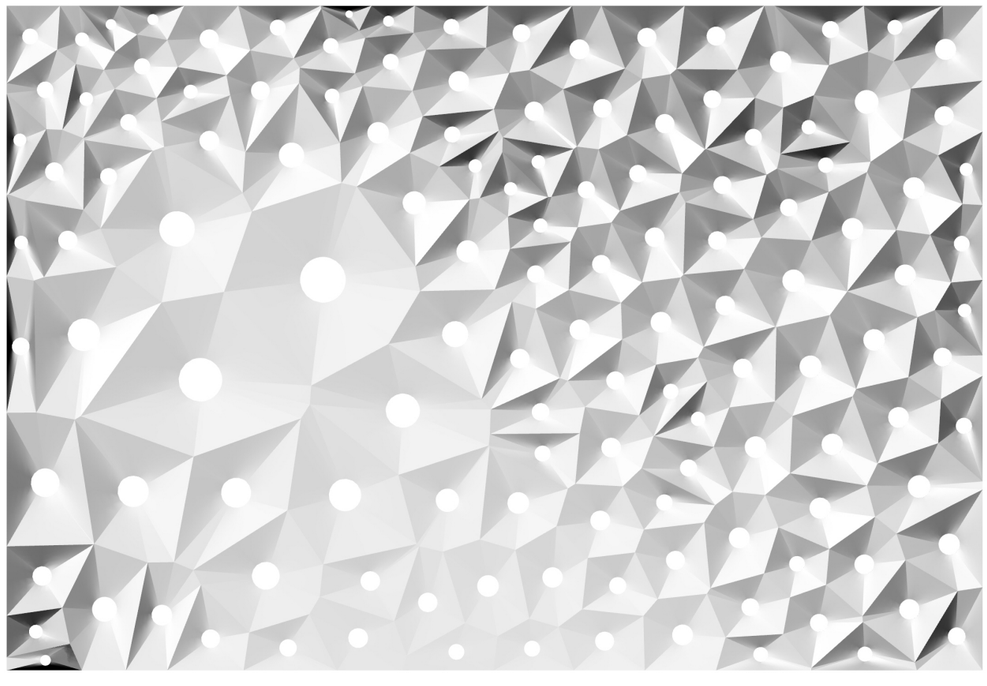
PERSPECTIVE

VERSION 14

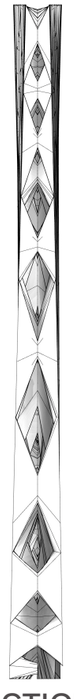
BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

WALL A:REGION COORDINATES (BASE):
PT 1 Y: 3, PT 1 Z: 1.75 PT2 Y: 20, PT 2 Z: 1.32
PT 3 Y: 38, PT 3 Z: 0.65 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y:20, PT 2 Z: 1.5
PT 3 Y: 47, PT 3 Z: 0.5 PT 4 Y:72, PT 4Z: 12.5
WALL B:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 0.8 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 1.5 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y: 56, PT 2 Z: 0.3
PT 3 Y: , PT 3 Z: 0.2 PT 4 Y:72, PT 4Z: 1. 56

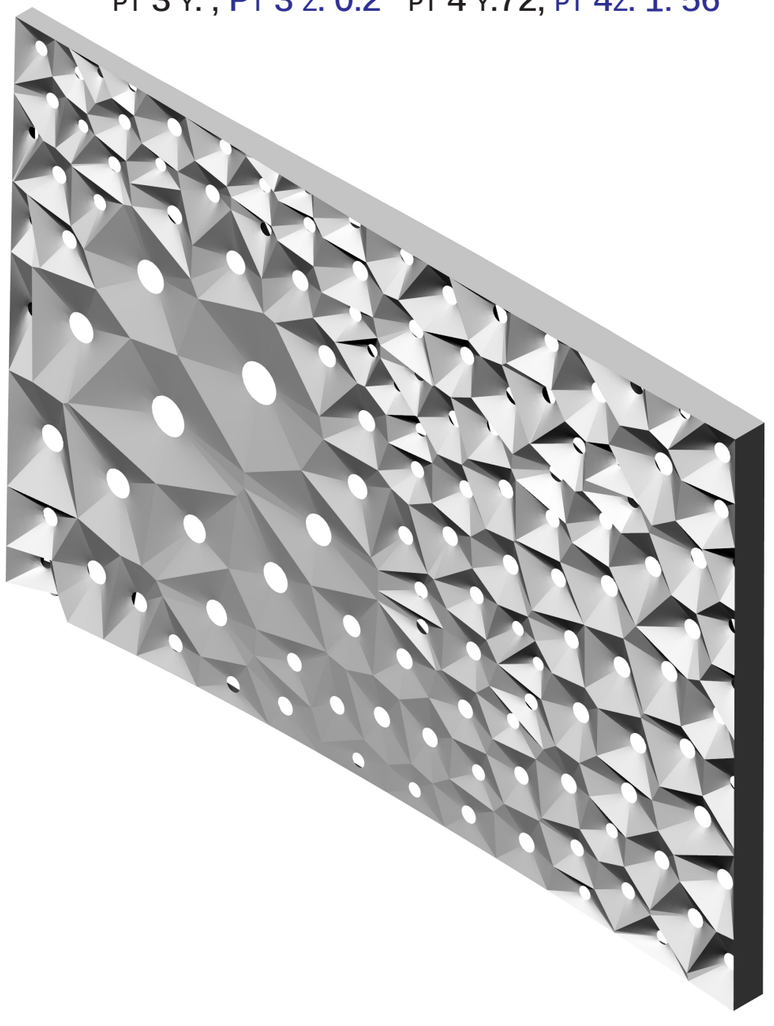
PLAN VIEW



FRONT VIEW



SECTION



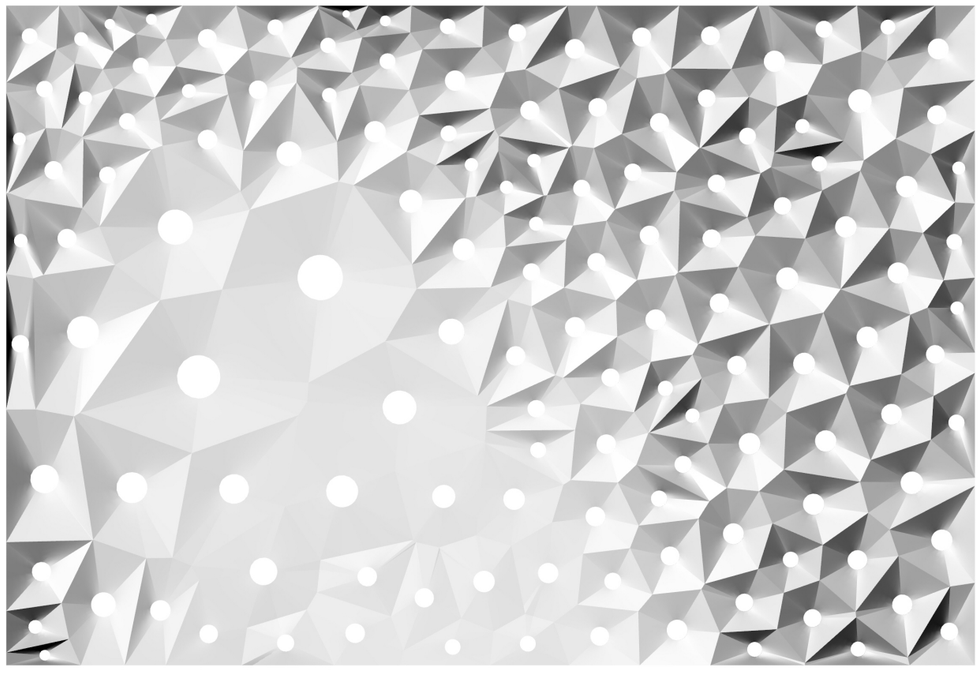
PERSPECTIVE

VERSION 15

BASE PARAMETER VALUES
ATTRACTOR COORDINATE: 0.56; 0.6
POINT POPULATION: 125
A/B SURFACE GENERATION: 7
SCALE FACTOR OPTIONAL SOFT LOFTING: 0.72
MOVEMENT FACTOR: 30
OF CLOSEST PTS TO MOVE OUT: 41

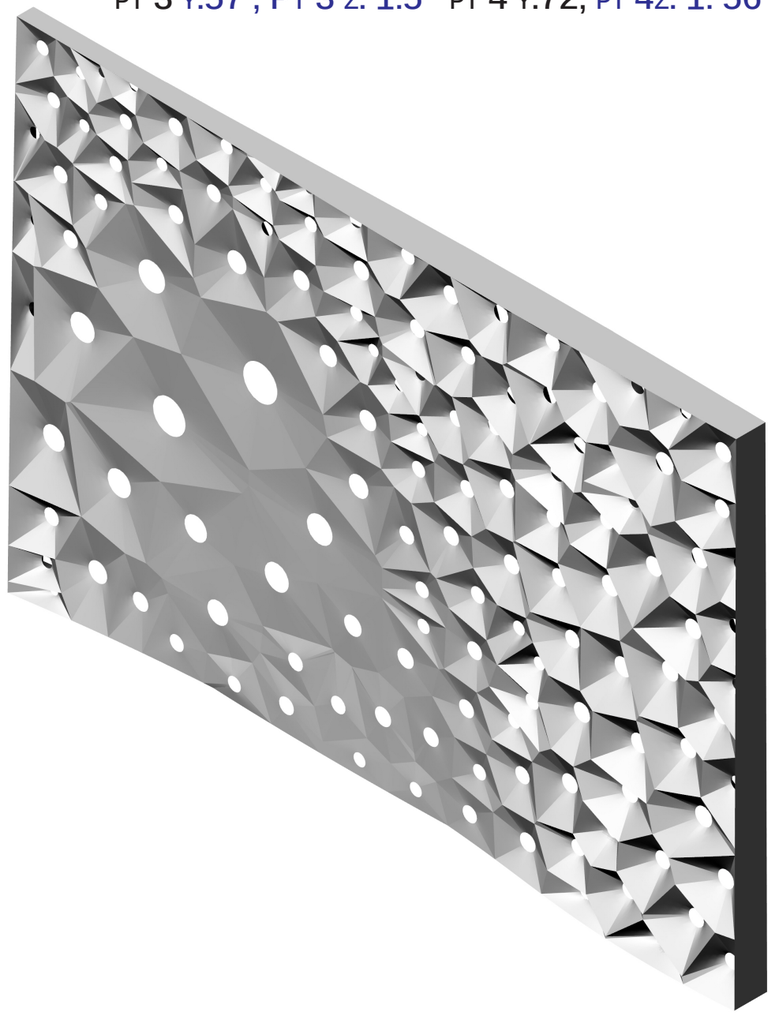
WALL A:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 0.8 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 1.5 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y: 56, PT 2 Z: 0.3
PT 3 Y: 67, PT 3 Z: 0.2 PT 4 Y:72, PT 4Z: 1. 56
WALL B:REGION COORDINATES (BASE):
PT 1 Y: 1, PT 1 Z: 0.8 PT2 Y: 20, PT 2 Z: 1
PT 3 Y: 38, PT 3 Z: 1.5 PT 4 Y:72, PT 4Z: 1.4
REGION COORDINATES (BASE2):
PT 1 Y: 1, PT 1 Z: 1.98 PT2 Y: 47, PT 2 Z: 0.3
PT 3 Y:57 , PT 3 Z: 1.5 PT 4 Y:72, PT 4Z: 1. 56

PLAN VIEW



FRONT VIEW

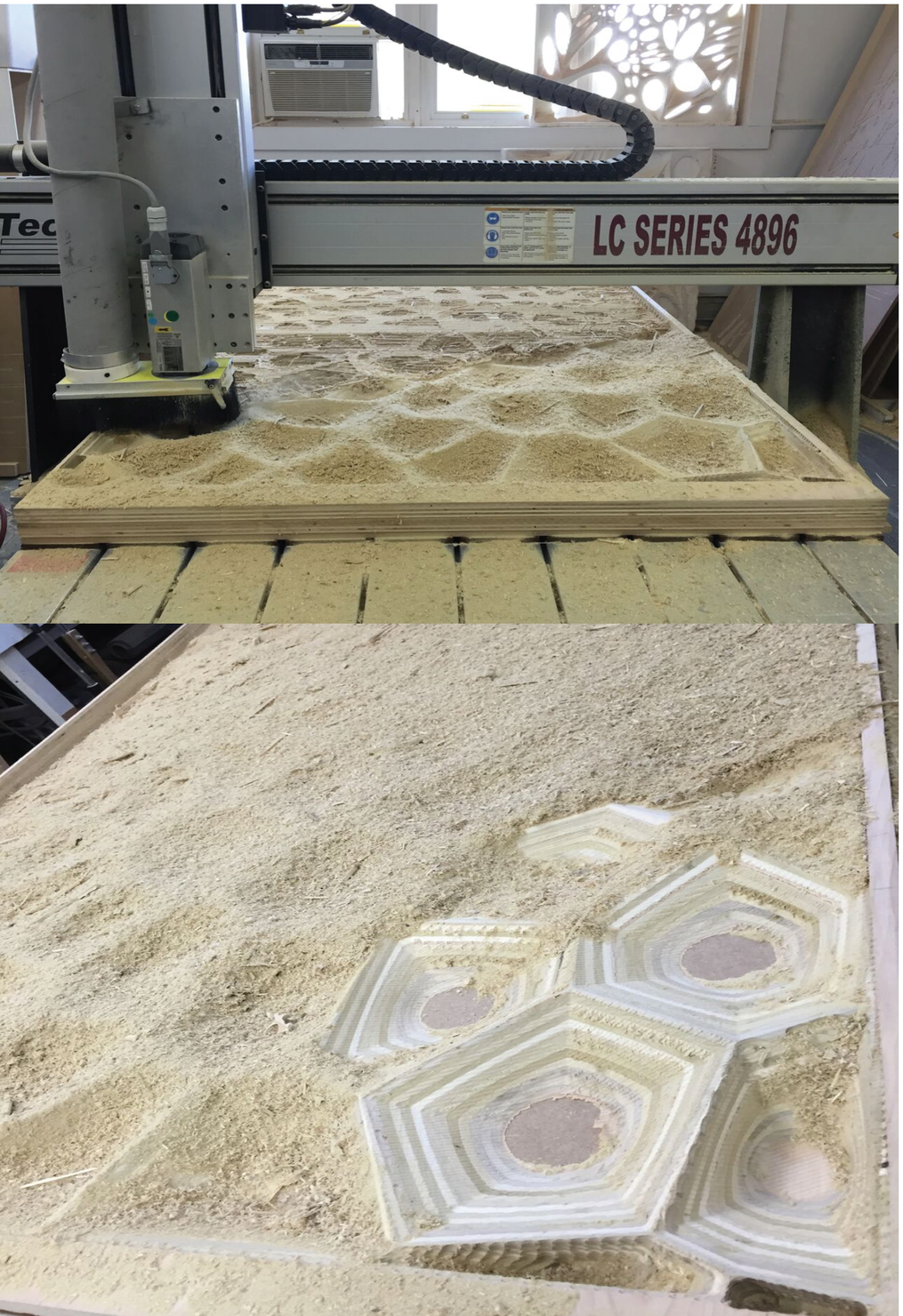
SECTION



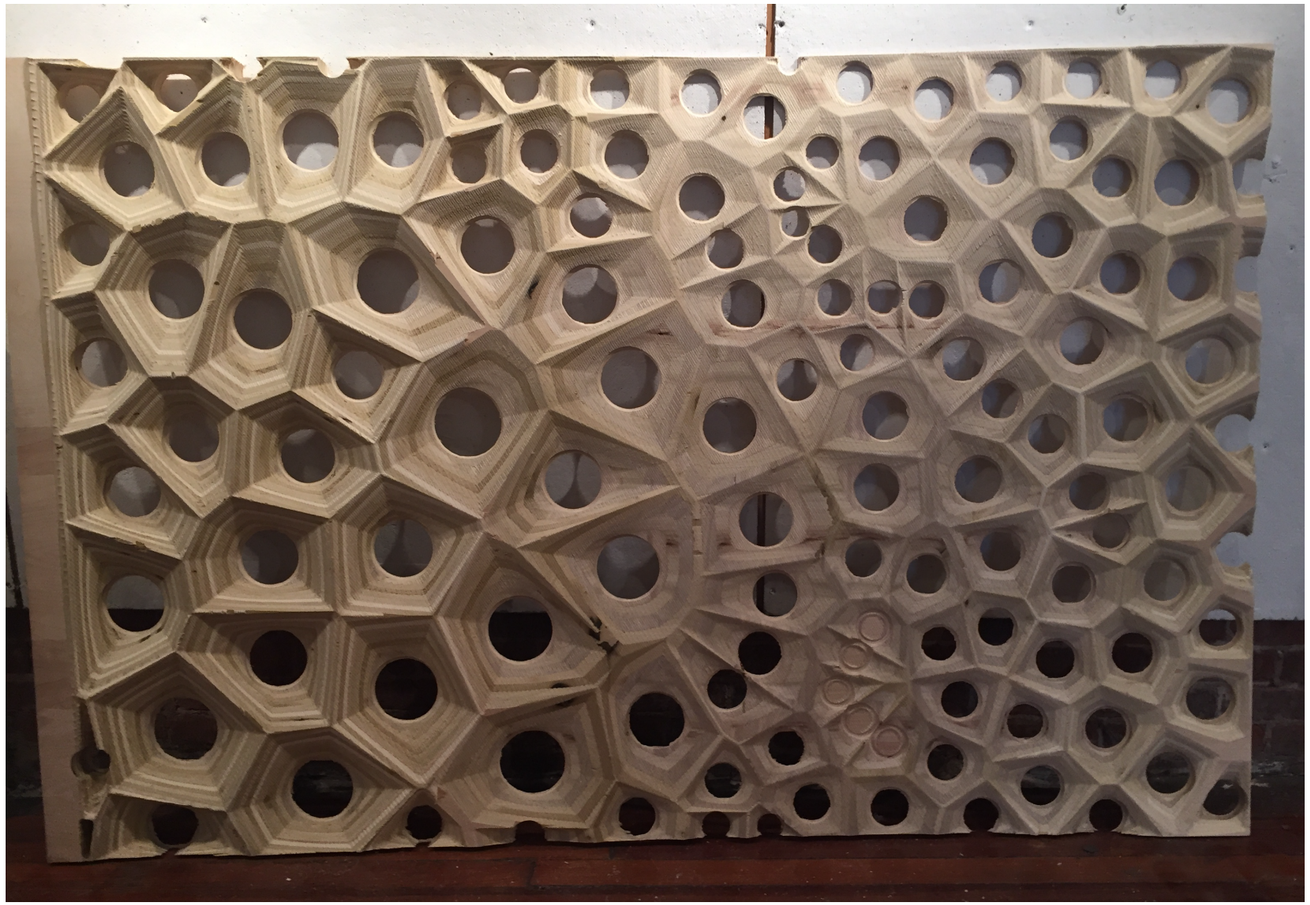
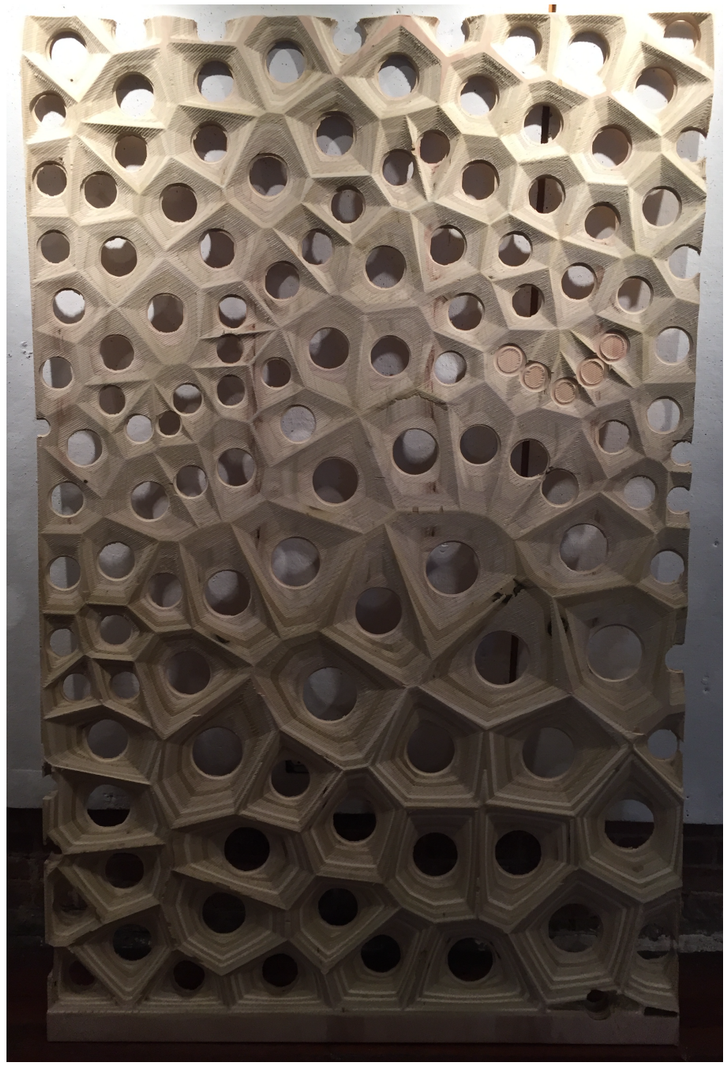
PERSPECTIVE

FABRICATION: ROUGHING

FABRICATION: FINISHING



FABRICATION: PROFILING

FABRICATION: SANDING

FINAL FABRICATED SCREEN